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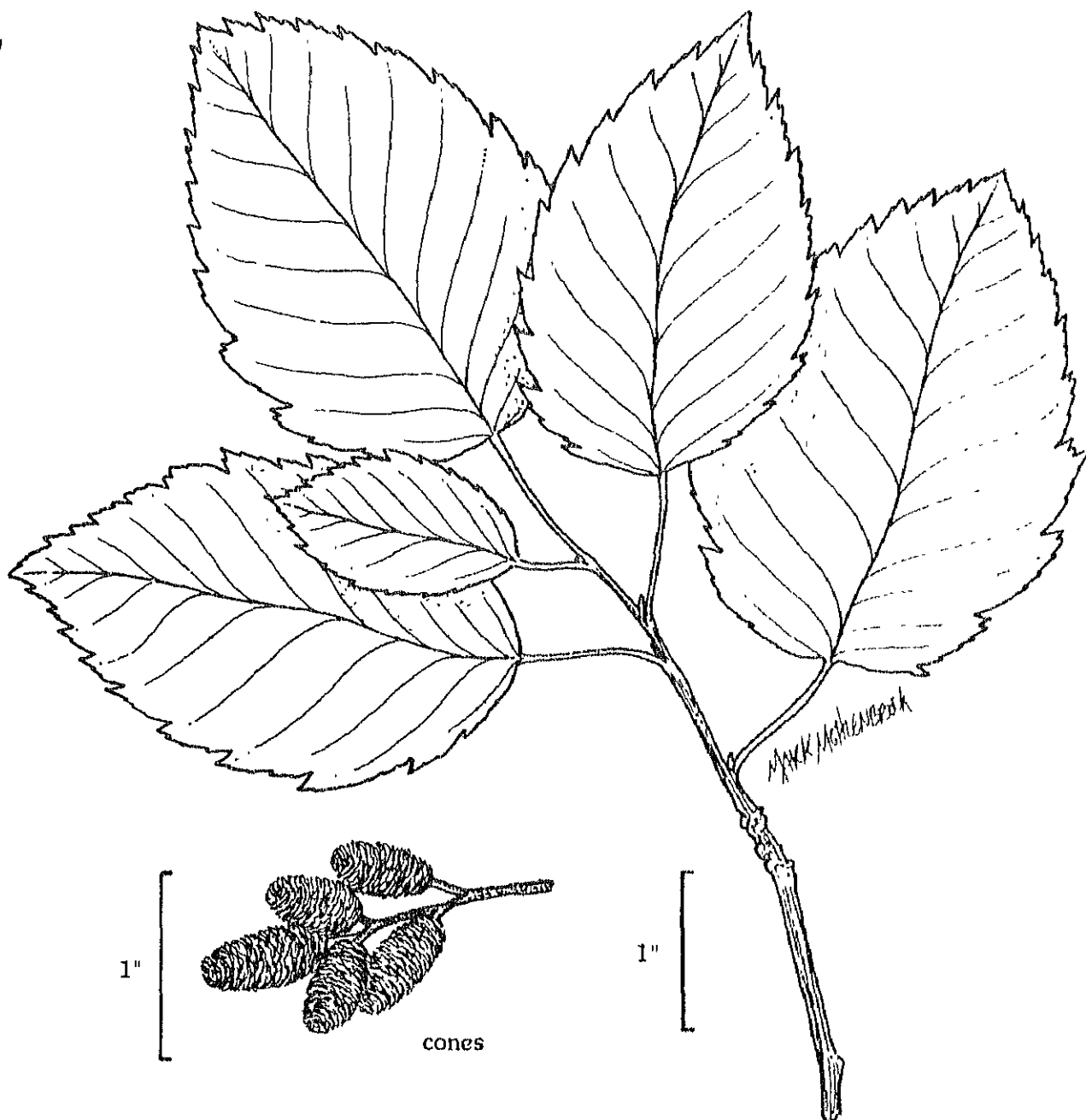
West National
Technical Center

Portland,
Oregon



Western Wetland Flora

Field Office Guide to Plant Species



Speckled Alder
Alnus incana (L.) Moench

Field Office Illustrated Guide to Plant Species

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Introduction

This Field Guide was prepared by Biotic Consultants, Incorporated, of Carbondale, Illinois, under Contract #54-0484-1-20. All descriptions have been written by Robert H. Mohlenbrock. Mark Mohlenbrock prepared all of the illustrations. All maps were prepared by Trent Mohlenbrock. Beverly Mohlenbrock typed all the drafts of the manuscript and assisted with the photography and field work. Typesetting was provided by Wendy Preece of Accents in Ink in Chandler, Arizona. Mark Mohlenbrock and Aart-weik Graphic Design, Incorporated, of Tempe, Arizona, prepared the camera-ready copy for the entire guide. Robert H. Mohlenbrock took the photos except the following: Joe F. Duft (*Alnus incana*, *Angelica arguta*, *Arnica longifolia*, *Aster hesperius*, *Astragalus canadensis*, *Bassia hyssopifolia*, *Cardamine breweri*, *Centaureum exaltatum*, *Circaea alpina*, *Epilobium glaberrimum*, *Glaux maritima*, *Haplopappus lanceolatus*, *Helianthus nuttallii*, *Iva axillaris*, *Limosella aquatica*, *Monolepis nuttalliana*, *Oenothera elata*, *Populus angustifolia*, *Potamogeton praelongus*, *Potentilla anserina*, *Ranunculus glaberrimus*, *Ranunculus gmelinii*, *Ribes hudsonianum*, *Rorippa cuiusvisliqua*, *Rorippa sinuata*, *Rumex maritimus*, *Sanguisorba minor*, *Suaeda occidentalis* (2), *Tamarix chinensis*, *Utricularia minor*, *Viola nephrophylla*); Ralph Faust (*Arnica diversifolia*, *Barbarea orthoceras*); William and Wilma Follette (*Agoseris aurantiaca*, *Amaranthus californicus*, *Anemopsis californica*, *Arnica amplexicaulis*, *Arnica chamissonis*, *Arnica mollis*, *Aster chilensis*, *Baccharis glutinosa*, *Camassia quamash* (2), *Cardamine oligosperma*, *Conium maculatum*, *Cordylanthus maritimus*, *Cotula coronopifolia*, *Cressa truxillensis*, *Delphinium glaucum*, *Downingia bicolorata*, *Downingia laeta*, *Heliotropium curassavicum*, *Hydrophyllum occidentale*, *Hypericum anagalloides*, *Kalmia microphylla*, *Lilaea scilloides* (2), *Listera convallarioides*, *Machaerocarpus californicus*, *Mimulus cardinalis*, *Mimulus primuloides*, *Parnassia palustris*, *Perideridia parishii*, *Pluchea sericea*, *Potamogeton natans*, *Potentilla palustris*, *Potentilla plattensis*, *Ranunculus alismifolius*, *Ranunculus aquatilis*, *Ranunculus cymbalaria*, *Ranunculus flammula*, *Ranunculus ortho hynchus*, *Ranunculus subrigidus*, *Rumex occidentalis*, *Sagina saginoides*, *Salix lasiandra*, *Salix lasiolepis*, *Salix lemmonii*, *Sambucus cerulea*, *Sidalcea oregana*, *Sisyrinchium idahoense*, *Stellaria longipes*, *Trifolium wormskioldii*, *Triglochin maritimum* (2), *Veronica americana*, *Viola macloskeyi*); James R. Johnson (*Phleum pratense*); Gary Laison (*Adiantum capillus-veneris*, *Alisma gramineum*, *Astragalus agrestis*, *Beckmannia syzigachne*, *Berula erecta*, *Callitriche hermaphroditica*, *Callitriche verna*, *Catabrosa aquatica*, *Chenopodium rubrum*, *Marsilea vestita*, *Myriophyllum verticillatum*, *Scirpus maritimus* habit); James D. Morefield (*Centaureum calycosum* (2), *Nitrophila occidentalis*); Bob Moseley (*Allium validum*, *Lomatogonium rotatum*, *Mimulus suksdorfii*, *Polygonum viviparum*, *Potentilla glandulosa*, *Primula incana*, *Ranunculus eschscholtzii*, *Salicornia rubra*, *Stellaria umbellata*, *Trifolium macrocephalum*); Robert Tatina (*Dodecatheon pauciflorum*, *Glycyrrhiza lepidota*, *Kalmia polifolia*, *Oenothera flava*, *Petasites sagittata*, *Phyla cuneifolia*, *Potentilla arguta*); W. Carl Taylor (*Botrychium lanceolatum*, *Botrychium lunaria*, *Galium boreale*, *Gentiana calycosa*, *Iliamna rivularis*, *Isoetes echinospora*, *Isoetes lacustris*, *Ledum glandulosum*, *Mitella pentandra*, *Smilacina stellata*, *Woodwardia fimbriata*); Edward Voss (*Potamogeton robbinsii*, *Ranunculus pensylvanicus*, *Ruppia maritima*, *Zannichellia palustris* habit); Mr. & Mrs. Robert G. Young (*Antennaria corymbosum*, *Arabis drummondii*, *Castilleja miniata*, *Corydalis caseana* (2), *Crepis runcinata*, *Dodecatheon pulchellum*, *Erigeron peregrinus*, *Geranium richardsonii*, *Parnassia fimbriata*, *Plagiobothrys scouleri*, *Polemonium occidentale*, *Potentilla arguta*, *Saxifraga arguta*, *Senecio hydrophilus*, *Sidalcea neomexicana*, *Spiranthes romanoffiana*, *Tamarix ramosissima*, *Trifolium longipes*, *Valeriana occidentalis*, *Veratrum californicum*). We are grateful to the Cram Map Company of Indianapolis for permission to use their base maps of the United States.

Purpose of the Guide

The swampbuster provision of the Food Security Act of 1985 requires the Soil Conservation Service to make wetland/converted wetland determinations based on the presence of hydric soils and hydrophytic vegetation. This is necessary to assist the United States Department of Agriculture program agencies in determining producer eligibility for USDA program benefits. The material contained in this illustrated wetland guide will enable persons, regardless of their botanical background, to identify the plants included in this guide.

Three hundred species of vascular plants were chosen for inclusion in this guide by the Planning Staff of the Soil Conservation Service West National Technical Center in Portland, Oregon, after consultation with each Soil Conservation Service state biologist in the western region.

Organization and Use of the Guide

The presentation of each of the 300 species is included on two pages. The plants are arranged by groups. Within each group they are further arranged alphabetically by genus, and then alphabetically by species within each genus. The front of each page gives the common and scientific names of the plant, following the National List of Plant Species that Occur in Wetlands: Regions 4, 5, 7, 8, 9, 0, and A, prepared by the United States Fish and Wildlife Service in 1988. The scientific name consists of two Latin names. The first is called the genus name, the second is the species. After these two Latin names is one or more abbreviation(s) that stand for the name (or names) of the botanist(s) who first gave the plant its correct name. These abbreviated names are referred to as the authority. This is followed by a statement indicating the months of the year that the flower is in bloom. Under the category entitled Field Marks is the combination of characters that distinguishes the species from any others. The remainder of the front side of the page has a black-and-white illustration of the entire plant and, as needed, a close-up illustration of one of the parts of the plant.

On the back of each page is one or more colored photograph(s) of the species and a map showing the distribution of the species in the United States. The distribution map was compiled after consultation of all existing floras of the United States. The map gives only a general range of the species. A state which is completely covered by the pattern does not necessarily mean that the plant occurs in every county, although it might be expected in every county.

The remainder of the back page is devoted to a description of the plant, including characteristics of the habitat in which it is found, the growth form, stems, leaves, flowers (sepals, petals, stamens, pistils), fruits, and seeds. Useful or other features of the plant are included under Notes.

To use the guide, one identifies the plant to group, either with the key or from experience and prior knowledge, and then refers to the plant description. If the plant is not encountered in the descriptions, it is obviously not covered by this guide, and the investigator must consult other references.

GLOSSARY

Achene. A one-seeded, dry, indehiscent fruit with the seed coat not attached to the mature ovary wall

Annual. Living only for one year

Anther. The pollen-producing part of a stamen

Arcuate. Curved

Auriculate. Bearing ear-shaped lobes

Awn. A bristle-like process

Bearded. With a tuft of hairs.

Berry. A fruit with the seeds surrounded only by fleshy material.

Biennial. Living for two years

Bract. An accessory structure at the base of some flowers, usually appearing leaf-like.

Bracteole. A secondary bract.

Bractlet. A small bract

Bristle. A stiff hair

Calyx. All the sepals of a flower

Capsule. A dry, dehiscent fruit splitting into 3 or more parts.

Cilia. Marginal hairs.

Ciliate. Bearing marginal hairs.

Clasping. Said of leaves that partially encircle the stem at the base.

Compressed. Flattened

Connate. Union of like parts

Cordate. Heart-shaped.

Corm. An underground, tuber-like stem that stores food.

Corolla. All the petals of a flower.

Corymb. A type of flat-topped, branched inflorescence.

Crest. A small ridge.

Cyme. A type of inflorescence in which the central flowers open first.

Cymose. In the form of a cyme.

Deciduous. Falling off.

Dehiscent. Splitting at maturity

Diaphragmed. Divided by partitions.

Disk. The central group of flowers in the head of the aster family; a fleshy growth that sometimes surrounds the ovary.

Drupe. A fruit with the seed surrounded by a hard, dry covering which, in turn, is surrounded by fleshy material.

Drupelet. A small drupe.

Ellipsoid. Referring to a solid object that is broad at the middle, gradually tapering to both ends.

Elliptic. Broadest at the middle, gradually tapering to both ends

Exfoliating. Stripping off.

Exserted. Projecting.

Fibrous. Referring to a cluster of slender roots, with the same diameter

Filament. The stalk of a stamen.

Fissured. Grooved.

Follicle. A dry, dehiscent fruit that splits along one side at maturity.

Furrowed. Grooved.

Glabrous. Smooth.

Glaucous. Having a bluish appearance.

Globose. Round.

Glume. A sterile scale found in grasses.

Hastate. Arrowhead-shaped, except that the base lobes spread outward.

Hemispherical. Half-round.

Indehiscent. Not splitting open at maturity.

Inferior. Referring to the position of the ovary when it is below the point of attachment of the sepals and petals.

Inflorescence. A cluster of flowers

Involute. Rolled up lengthwise.

Lanceolate. Lance shaped; broadest near the base, gradually tapering to the narrower apex.

Lanceoloid. Referring to a solid object that is broadest near the base, gradually tapering to the narrower apex.

Latex. Milky sap.

Lemma. A fertile scale found in grasses.

Lenticel. A small opening on a stem.

Ligule. A structure on the inside at the junction of the leaf blade and leaf sheath.

Linear. Elongated and uniform in width throughout

Mucronate. With a short point sticking out the tip

Node. That place on a stem where leaves and buds arise.

Nutlet. A small nut.

Obconic. Reverse cone shaped.

Oblanceolate. Reverse lance-shaped; broadest at the apex, gradually tapering to the narrower base.

Oblong. Broadest at the middle, and tapering to both ends, but broader than elliptic.

Oblongoid. Referring to a solid object that, in side view, is nearly the same width throughout

Obovate. Broadly rounded at the apex, becoming narrowed below

Obovoid. Referring to a solid object that is broadly rounded at the apex, becoming narrowed below

Orbicular. Round.

Ovary. That part of the pistil that contains the ovules.

Ovate. Broadly rounded at the base, becoming narrowed above, broader than lanceolate

Ovoid. Referring to a solid object that is broadly rounded at the base, becoming narrowed above

Ovule. Immature seed

Palmate. Divided radiately, like the fingers of a hand

Panicle. An arrangement of flowers consisting of several racemes

Pappus. Tufts of hairs attached to achenes of the aster family

Peduncle. The stalk of an inflorescence.

Peltate. Attached at the middle.

Pendulous. Drooping

Perennial. Living for 3 or more years

Perforation. A circular opening.

Perianth. All the sepals and petals of a flower

Perigynium. A sac-like structure enclosing the pistil and later the seed in *Carex*.

Petiole. Leaf stalk.

Pinnate. Divided once along an elongated axis into distinct segments.

Pinnatifid. Divided nearly to the axis.

Pistil. The ovule-producing part of the flower

Pith. The central, often soft, part of a stem

Plumose. Feathery.

Prostrate. Lying flat on the ground.

Raceme. A grouping of flowers along an elongated axis where each flower has its own stalk.

Rachis. The axis of a flowering branch.

Ray. A flattened flower part in the aster family that is actually several petals fused together.

Receptacle. That part of the flower to which the sepals, petals, stamens, and pistils are usually attached

Recurved. Curving downward.

Reflexed. Turned downward

Reticulate. Like a net.

Revolute. Turned under along the edges.

Rhizome. An underground, horizontal stem

Ribbed. Bearing ridges.

Rosette. A cluster of leaves around the base of the plant.

Samara. An indehiscent winged fruit

Scale. A tiny, leaf-like structure; the structure that subtends each flower in a grass or sedge

Septate. With cross-walls

Sessile. Without a stalk.

Setose. Bearing bristles.

Sheath. The base of a leaf that encircles the stem.

Sori. Structures found in ferns that contain the spore-producing sporangia

Spadix. A fleshy axis in which flowers are embedded.

Spathe. A large bract subtending or sometimes enclosing a cluster of flowers.

Spatulate. Shaped like a spatula, broadest at the tip and tapering to the base

Spike. A grouping of flowers along an elongated axis where each flower lacks a stalk.

Spikelet. A small spike

Spinulose. Bearing small spines.

Sporangia. Structures that bear spores

Spore. A microscopic reproductive body in ferns

Spur. A slender, backward-pointing part of some flowers.

Stamen. The pollen-producing organ of a flower.

Stigma. The terminal part of a pistil.

Stipule. A green, often leaf-like structure found at the base of some leaves

Stolon. A horizontal stem lying on the surface of the soil.

Style. That part of the pistil between the ovary and the stigma.

Subglobose. Nearly round

Succulent. Fleshy.

Superior. Referring to the position of the ovary when it is above the point of attachment of the sepals, petals, stamens, and pistils

Sutures. Seams, areas where splitting occurs.

Tendrill. A device, usually coiled, that enables some vines to climb.

Ternate. Divided into 3's.

Truncate. Cut straight across.

Tuber. A thickened, underground stem that stores food.

Tubercle. A wart-like process.

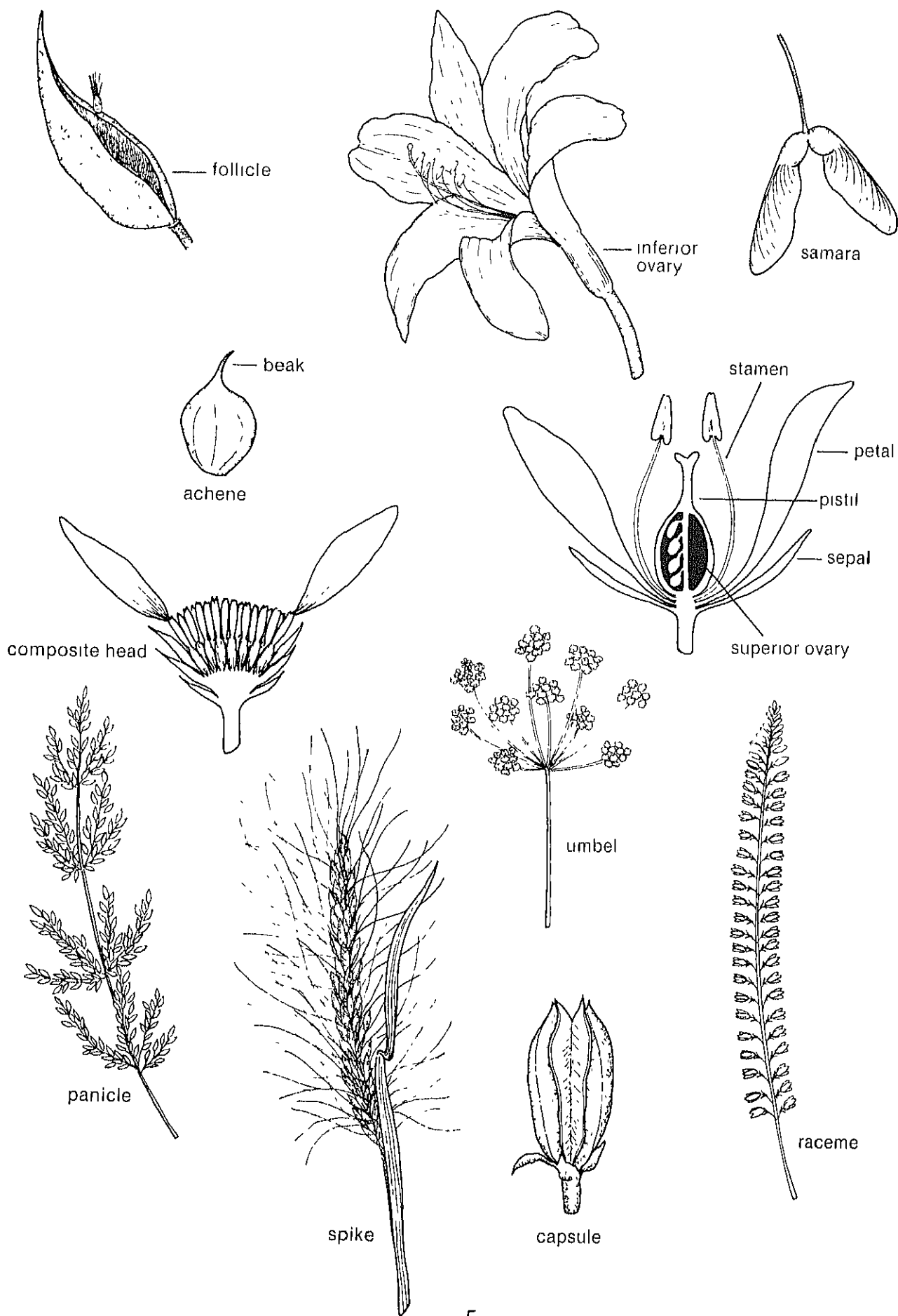
Umbel. A cluster of flowers in which the flower stalks arise from the same level.

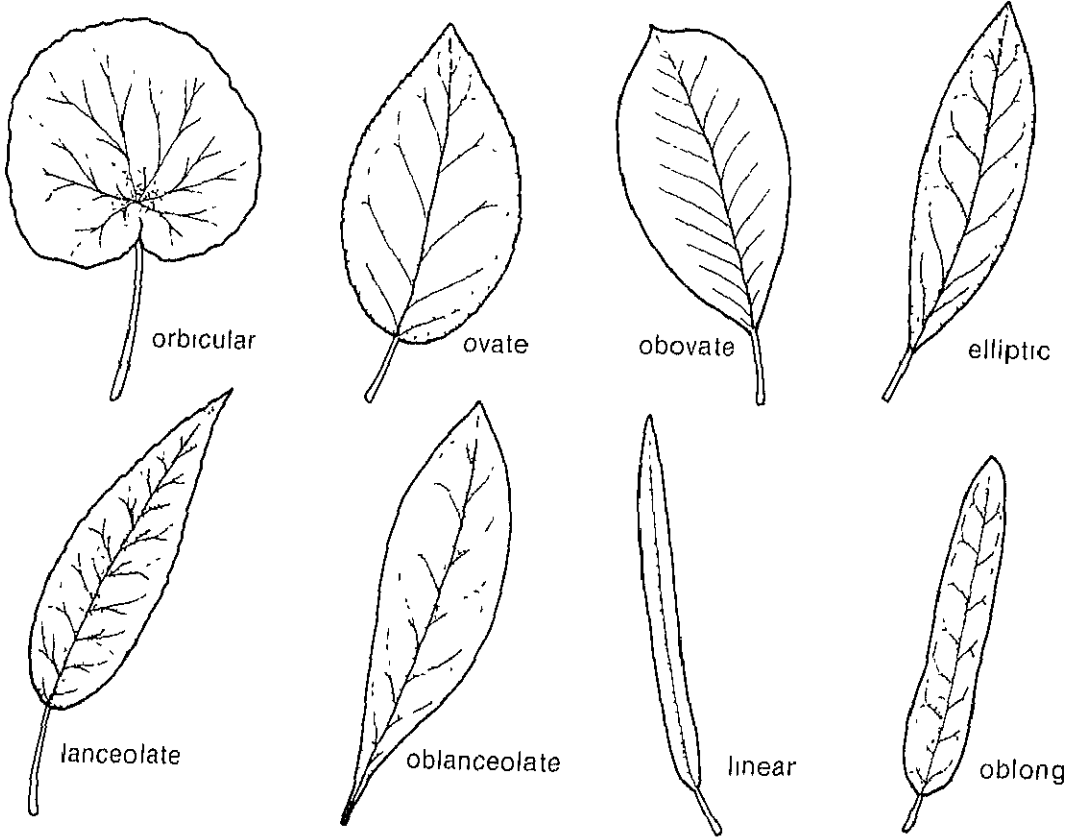
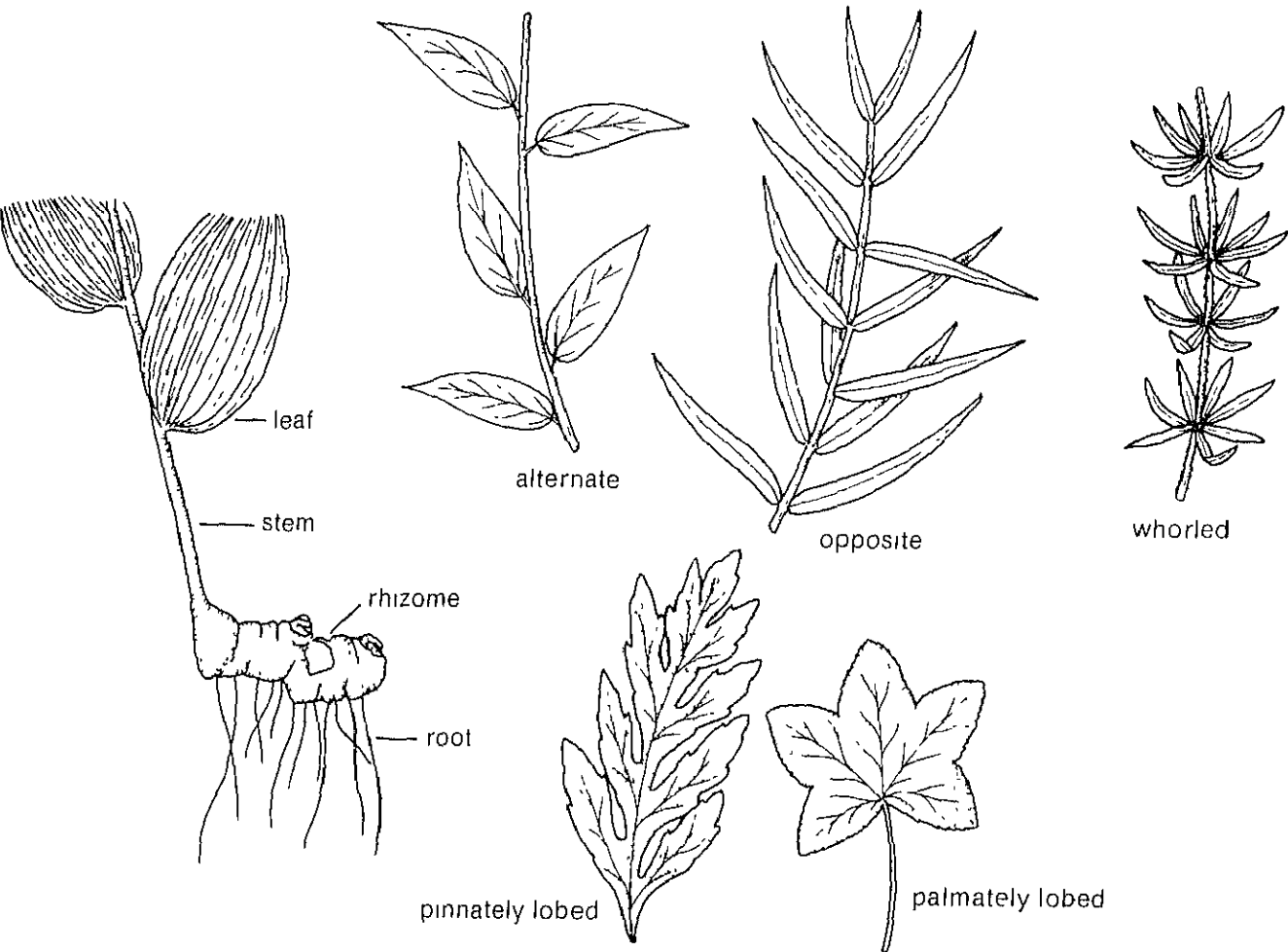
Undulating. Wavy.

Valvate. Placed edge to edge.

Valve. The wing of the fruit in *Rumex*

Whorl. An arrangement of 3 or more structures at a point on the stem.





List of Western Wetland Flora in This Project

The 300 Western wetland plants selected for this project are given in the following list. The list is arranged by groups as found in the key to groups. Within each group the plants are arranged alphabetically first by the scientific name of the genus, then alphabetically by species within the genus. The scientific and common names are those given in the National List of Plant Species that Occur in Wetlands, Regions 4, 5, 7, 8, 9, 0, and A, 1988.

Group 1. Ferns and Fern-related Plants

Adiantum capillus-veneris - Southern Maiden-hair Fern
Adiantum pedatum - Northern Maiden-hair Fern
Athyrium filix-femina - Subarctic Lady Fern
Botrychium lanceolatum - Triangle Moonwort
Botrychium lunaria - Moonwort
Isoetes echinospora - Spiny-spore Quillwort
Isoetes lacustris - Western Quillwort
Marsilea vestita - Hairy Water Fern
Woodwardia fimbriata - Giant Chainfern

Group 2. Grasses

Agropyron trachycaulum - Slender Wheatgrass
Agrostis exarata - Spike Bentgrass
Agrostis idahoensis - Idaho Bentgrass
Alopecurus aequalis - Short-awn Foxtail
Alopecurus alpinus - Mountain Foxtail
Arundo donax - Giant Reed
Beckmannia syzigachne - American Sloughgrass
Calamagrostis inexpansa - Narrow-spike Small-reedgrass
Calamagrostis neglecta - Slimstem Reedgrass
Catabrosa aquatica - Brookgrass
Cinna latifolia - Slender Wood-reedgrass
Danthonia californica - California Oatgrass
Deschampsia cespitosa - Tufted Hairgrass
Deschampsia danthonioides - Annual Hairgrass
Deschampsia elongata - Slender Hairgrass
Distichlis stricta - Inland Saltgrass
Elymus cinereus - Basin Wild-rye
Elymus triticoides - Creeping Wild-rye
Glyceria borealis - Small Floating Manna Grass
Glyceria elata - Tall Manna Grass
Hierochloa odorata - Holy Grass
Holcus lanatus - Common Velvet Grass
Hordeum brachyantherum - Meadow Barley
Leptochloa fascicularis - Bearded Sprangle-top

Muhlenbergia asperifolia - Alkali Muhly
Panicum dichotomiflorum - Fall Panic Grass
Phleum pratense - Timothy
Poa juncifolia - Alkali Bluegrass
Poa leptocoma - Bog Bluegrass
Poa nevadensis - Nevada Bluegrass
Poa palustris - Fowl Bluegrass
Polypogon monspeliensis - Annual Rabbit-foot Grass
Puccinellia airoides - Nuttall Alkali Grass
Puccinellia distans - Weeping Alkali Grass
Puccinellia pauciflora - Weak Manna Grass
Spartina gracilis - Alkali Cordgrass
Sporobolus airoides - Alkali Sacaton
Trisetum spicatum - Spiked False-oats

Group 3. Sedges

Carex athrostachya - Slender-beak Sedge
Carex aurea - Golden-fruit Sedge
Carex bella - Showy Sedge
Carex buxbaumii - Brown Bog Sedge
Carex canescens - Hoary Sedge
Carex diandra - Lesser Panicle Sedge
Carex douglasii - Douglas' Sedge
Carex kelloggii - Kellogg's Sedge
Carex lenticularis - Shore Sedge
Carex leptalea - Bristly-stalk Sedge
Carex limosa - Mud Sedge
Carex luzulina - Wood-rush Sedge
Carex microptera - Small-wing Sedge
Carex nebrascensis - Nebraska Sedge
Carex praegracilis - Clustered Field Sedge
Carex raynoldsii - Raynolds' Sedge
Carex rostrata - Beaked Sedge
Carex saxatilis - Russet Sedge
Carex scopulorum - Holm's Rocky Mountain Sedge
Carex simulata - Short-beak Sedge
Carex vesicaria - Inflated Sedge
Carex viridula - Little Green Sedge

Cyperus aristatus - Awned Flatsedge
Eleocharis macrostachya - Creeping Spikerush
Eleocharis pauciflora - Few-flower Spikerush
Eleocharis rostellata - Beaked Spikerush
Eriophorum gracile - Slender Cotton-grass
Eriophorum scheuchzeri - Scheuchzer's Cotton-grass
Scirpus cespitosus - Tufted Bulrush
Scirpus maritimus - Saltmarsh Bulrush
Scirpus microcarpus - Small-fruit Bulrush
Scirpus pallidus - Cloaked Bulrush
Scirpus pungens - Three-square Bulrush

Group 4. Other Monocots

Alisma gramineum - Narrow-leaf
 Water-plantain
Allium validum - Tall Swamp Onion
Asparagus officinalis - Garden Asparagus-fern
Camassia quamash - Common Camassia
Cypripedium calceolus - Small Yellow Lady's-slipper
Juncus articulatus - Jointed Rush
Juncus biglumis - Two-flower Rush
Juncus castaneus - Chestnut Rush
Juncus confusus - Colorado Rush
Juncus drummondii - Drummond's Rush
Juncus ensifolius - Three-stamen Rush
Juncus longistylus - Long-style Rush
Juncus mertensianus - Merten's Rush
Juncus mexicanus - Mexican Rush
Juncus nevadensis - Sierra Rush
Juncus triglumis - Three-flower Rush
Lemna trisulca - Star Duckweed
Lemna valdiviana - Pale Duckweed
Lilaea scilloides - Flowering Quillwort
Listera convallarioides - Broad-leaf Twayblade
Luzula parviflora - Small-flower Woodrush
Luzula spicata - Spiked Woodrush
Machaerocarpus californicus - Fringed
 Water-plantain
Najas guadalupensis - Southern Naiad
Platanthera dilatata - Leafy White Orchid
Potamogeton filiformis - Fine-leaf Pondweed
Potamogeton natans - Floating-leaf Pondweed
Potamogeton pectinatus - Sago Pondweed
Potamogeton nodosus - Long-leaf Pondweed
Potamogeton praelongus - White-stem Pondweed
Potamogeton pusillus - Small Pondweed
Potamogeton richardsonii - Richardson Pondweed
Potamogeton robbinsii - Robbin's Pondweed

Potamogeton zosteriformis - Flat-stem Pondweed
Ruppia maritima - Widgeon-grass
Sagittaria cuneata - Northern Arrow-head
Sagittaria latifolia - Broad-leaf Arrow-head
Smilacina stellata - Starry False-Solomon's-seal
Sisyrinchium idahoense - Idaho Blue-eye-grass
Sparganium minimum - Small Burreed
Spiranthes romanzoffiana - Hooded Ladies'-tresses
Spirodela polyrhiza - Greater Duckweed
Triglochin maritimum - Seaside Arrow-grass
Typha angustifolia - Narrow-leaf Cattail
Typha latifolia - Broad-leaf Cattail
Vallisneria americana - Wild-Celery
Veratrum californicum - California False Hellebore
Zannichellia palustris - Horned Pondweed

Group 5. Trees and Shrubs, including Woody Vines

Alnus incana - Speckled Alder
Alnus tenuifolia - Thin-leaf Alder
Baccharis glutinosa - Sticky False-willow
Betula glandulosa - Tundra Dwarf Birch
Betula occidentalis - Spring Birch
Kalmia microphylla - Alpine Bog Laurel
Kalmia polifolia - Pale Laurel
Ledum glandulosum - Glandular Labrador-tea
Parthenocissus vitacea - Thicket Creeper
Populus angustifolia - Narrow-leaf Cotton-wood
Ribes hudsonianum - Hudson Bay Currant
Ribes inerme - White-stem Gooseberry
Salix amygdaloides - Peach-leaf Willow
Salix lasiandra - Pacific Willow
Salix lasiolepis - Arroyo Willow
Salix lemmonii - Lemmon's Willow
Salix planifolia - Diamond-leaf Willow
Sambucus cerulea - Blue Elder
Tamarix chinensis - Chinese Tamarisk
Tamarix ramosissima - Saltcedar

Group 6. Dicot Herbs with Some of the Leaves Compound

Angelica arguta - Lyall's Angelica
Astragalus agrestis - Field Milkvetch
Astragalus canadensis - Canada Milkvetch
Barbarea orthoceras - American Winter-cress
Berula erecta - Cut-leaf Water Parsnip
Cardamine breweri - Brewer's Bitter-cress

Cardamine oligosperma - Few-seed Bitter-cress
Cicuta douglasii - Western Water-hemlock
Conium maculatum - Poison-hemlock
Corydalis caseana - Sierra Corydalis
Geum macrophyllum - Large-leaf Avens
Glycyrrhiza lepidota - American Licorice
Hydrophyllum occidentale - California Water-leaf
Medicago lupulina - Black Medic
Melilotus alba - White Sweetclover
Menyanthes trifoliata - Buckbean
Myriophyllum verticillatum - Whorled Water-milfoil
Perideridia parishii - Parish's Yampah
Polemonium occidentale - Western Jacob's-ladder
Potentilla anserina - Silverweed
Potentilla arguta - Tall Cinquefoil
Potentilla diversifolia - Varileaf Cinquefoil
Potentilla glandulosa - Gland Cinquefoil
Potentilla gracilis - Northwest Cinquefoil
Potentilla palustris - Marsh Cinquefoil
Potentilla plattensis - Platte Cinquefoil
Ranunculus aquatilis - White Water Butter-cup
Ranunculus flabellaris - Yellow Water Butter-cup
Ranunculus gmelinii - Small Yellow Water
 Butter-cup
Ranunculus orthorhynchus - Straight-beak
 Butter-cup
Ranunculus repens - Creeping Butter-cup
Ranunculus subrigidus - Pond Butter-cup
Rorippa curvisiliqua - Curve-pod Yellow-cress
Rorippa sinuata - Spreading Yellow-cress
Sanguisorba minor - Small Burnet
Trifolium longipes - Long-stalk Clover
Trifolium macrocephalum - Large-head Clover
Trifolium pratense - Red Clover
Trifolium wormskioldii - Cows Clover
Utricularia minor - Lesser Bladderwort
Valeriana occidentalis - Western Valerian
Vicia americana - American Purple Vetch

Group 7. Dicot Herbs with Most or All of the Leaves Simple and Opposite or Whorled

Arnica amplexicaulis - Streambank Arnica
Arnica chamissonis - Leafy Arnica
Arnica diversifolia - Sticky-leaf Arnica
Arnica latifolia - Mountain Arnica
Arnica longifolia - Seep Spring Arnica
Arnica mollis - Hairy Arnica

Bergia texana - Texas Bergia
Callitriche hermaphroditica - Autumnal
 Water-starwort
Callitriche verna - Spiny Water-starwort
Centaureum calycosum - Arizona Centaury
Centaureum exaltatum - Tall Centaury
Centunculus minimus - Chaffweed
Circaea alpina - Small Enchanter's Nightshade
Epilobium glaberrimum - Glaucous Willow-herb
Galium boreale - Northern Bedstraw
Gentiana calycosa - Rainier Pleated Gentian
Gentianella amarella - Northern Gentian
Glaux maritima - Sea-milkwort
Helianthus nuttallii - Nuttall's Sunflower
Hippuris vulgaris - Common Mare's-tail
Hypericum anagalloides - Bog St. John's-wort
Iva axillaris - Small-flower Sumpweed
Lomatogonium rotatum - Marsh Felwort
Lycopus uniflorus - Northern Bugleweed
Mimulus cardinalis - Scarlet Monkey-flower
Mimulus guttatus - Common Large Monkey-flower
Mimulus suksdorfii - Suksdorf's Monkey-flower
Monarda fistulosa - Wild Bergamot
Montia chamissoi - Chamisso's Miner's-lettuce
Nitrophila occidentalis - Western Borax-weed
Sagina saginoides - Arctic Pearlwort
Salicornia rubra - Red Saltwort
Stellaria longifolia - Long-leaf Starwort
Stellaria longipes - Long-stalk Starwort
Stellaria umbellata - Umbellate Starwort
Veronica americana - American Speedwell
Veronica anagallis-aquatica - Water Speedwell
Veronica wormskioldii - American Alpine Speedwell

Group 8. Dicot Herbs with All the Leaves Simple and Basal and/or Alternate

Aconitum columbianum - Columbia Monkshood
Agoseris aurantiaca - Orange-flower False-dandelion
Amaranthus californicus - California Amaranth
Anemopsis californica - Yerba Mansa
Antennaria corymbosa - Flat-top Pussy-toes
Arabis drummondii - Drummond's Rockcress
Aster chilensis - Common California Aster
Aster hespertus - Siskiyou Aster
Bassia hyssopifolia - Five-horn Smother-weed
Caltha leptosepala - Slender-sepal Marsh-marigold
Cardamine cordifolia - Heart-leaf Bitter-cress

Castilleja miniata - Scarlet Indian-paintbrush
Chenopodium ambrosioides - American Wormseed
Chenopodium rubrum - Coast-blite Goosefoot
Cirsium arvense - Creeping Thistle
Cordylanthus maritimus - Saltmarsh Bird's-beak
Cotula coronopifolia - Brassbuttons
Crepis runcinata - Dandelion Hawksbeard
Cressa truxillensis - Spreading Alkali-weed
Delphinium glaucum - Tower Larkspur
Dodecatheon pauciflorum - Dark-throat
 Shooting-star
Dodecatheon pulchellum - Few-flower Shooting-star
Downingia bicolorata - Double-horn Downingia
Downingia laeta - Great Basin Downingia
Erigeron peregrinus - Wandering Fleabane
Geranium richardsonii - Richardson's Crane's-bill
Haplopappus lanceolatus - Lance-leaf Golden-weed
Heliotropium curassavicum - Seaside Heliotrope
Iliamna rivularis - Streambank Wild-hollyhock
Kochia scoparia - Mexican Summer-cypress
Limosella aquatica - Northern Mudwort
Mertensia ciliata - Streamside Bluebells
Mimulus primuloides - Primrose Monkey-flower
Mitella pentandra - Five-point Bishop's-cap
Monolepis nuttalliana - Nuttall's Poverty-weed
Myosurus aristatus - Sedge Mouse-tail
Oenothera elata - Hooker's Evening-primrose
Oenothera flava - Yellow Evening-primrose
Parnassia fimbriata - Fringed Grass-of-Parnassus
Parnassia palustris - Northern Grass-of-Parnassus
Pedicularis groenlandica - Elephant's-head
 Lousewort
Petasites sagittatus - Arrow-leaf Sweet Coltsfoot
Phyla cuneifolia - Wedge-leaf Frog-fruit
Plagiobothrys scouleri - Scouler Popcorn-flower
Plantago major - Common Plantain
Pluchea sericea - Arrow-weed
Polygonum bistortoides - American Bistort
Polygonum lapathifolium - Willow-weed
Polygonum persicaria - Lady's Thumb
Polygonum punctatum - Dotted Smartweed
Polygonum viviparum - Viviparous Knotweed
Primula incana - American Primrose
Ranunculus abortivus - Subalpine Butter-cup
Ranunculus alismifolius - Dwarf Butter-cup
Ranunculus cymbalaria - Seaside Butter-cup
Ranunculus eschscholtzii - Eschscholtz Butter-cup
Ranunculus flammula - Spearwort Butter-cup
Ranunculus glaberrimus - Sagebrush Butter-cup

Ranunculus pensylvanica - Pennsylvania Butter-cup
Rumex acetosella - Sheep Sorrel
Rumex maritimus - Golden Dock
Rumex occidentalis - Western Dock
Saxifraga arguta - Brook Saxifrage
Senecio hydrophilus - Water Groundsel
Senecio triangularis - Arrow-leaf Groundsel
Sidalcea neomexicana - New Mexico
 Checker-mallow
Sidalcea oregana - Oregon Checker-mallow
Suaeda depressa - Pursh Seepweed
Suaeda occidentalis - Western Seepweed
Trollius laxus - American Globeflower
Viola macloskeyi - Small White Violet
Viola nephrophylla - Northern Bog Violet

Key to Groups of Wetland Plants in West

1. Ferns or related plants, reproducing by spores, not seeds Group 1
1. Plants reproducing by flowers and seeds 2
 2. Plants woody, either trees, shrubs, or vines Group 5
 2. Plants herbaceous, stems not woody 3
- 3 Monocots, leaves usually with parallel veins; petals and sepals, if present, usually in 3's or multiples of 3's 4
3. Dicots; leaves usually with net veins; petals and sepals usually in 4's or 5's or multiples of 4's or 5's 6
 4. Flowers without sepals and petals; each flower subtended by one or more scales and borne in spikelets 5
 4. Flowers with sepals and petals (green or brown or black in *Juncus*), the flowers not arranged in spikelets Group 4
- 5 At least one or more scales at the base of each spikelet not subtending a flower; stems never triangular Group 2
5. All the scales of a spikelet subtending a flower; stems sometimes triangular Group 3
 - 6 At least some of the leaves compound; that is, divided into distinct leaflets Group 6
 6. None of the leaves compound, although they may be deeply divided 7
7. Most or all of the leaves opposite or whorled Group 7
7. Most or all of the leaves alternate and/or basal Group 8

GROUP 1

Ferns and Fern-related Plants

GROUP 1

Ferns and Fern-related Plants

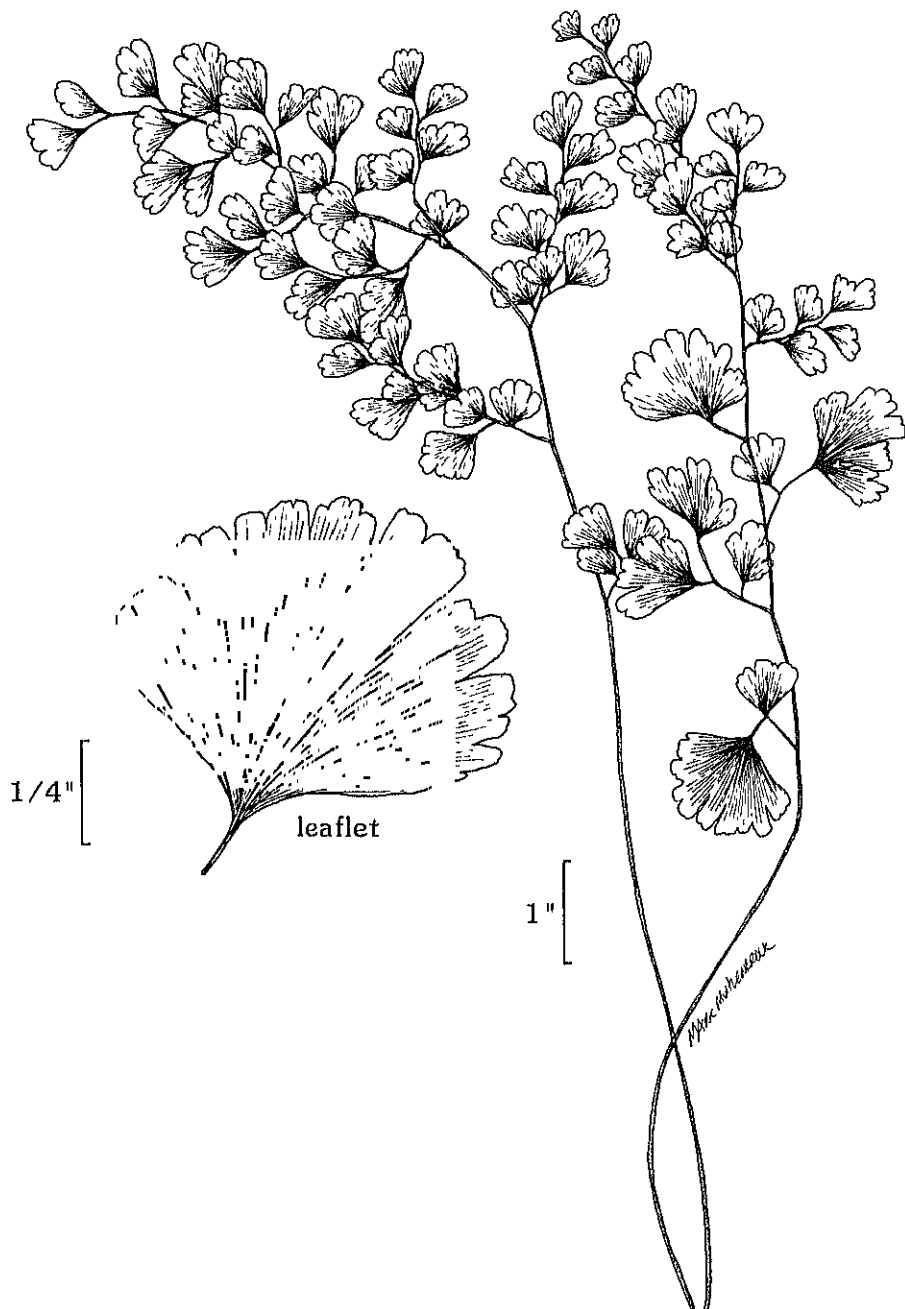
Southern Maiden-hair Fern

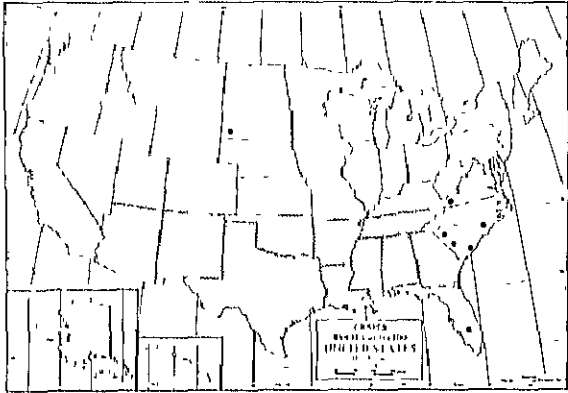
Adiantum capillus-veneris L.

Family: Fern (Polypodiaceae)

Spores: July-September

Field Marks: Leaves that are much longer than wide distinguish this fern from the northern maiden-hair fern (*A. pedatum*). Both species have shiny, purple leaf stalks and reproductive structures protected by the recurved edge of the leaves.





Local Notes:

Habitat: Stream banks, limestone ledges, around springs.

Habit: Perennial fern with creeping rhizomes.

Stems: All underground as creeping rhizomes.

Leaves: Usually drooping, 2- to 3-pinnate, the leaf segments alternate, obovate, up to 1 1/4 inches long, thin, smooth, some of them round lobed and toothed, on a short stalk; main leaf stalks shiny, purple, up to 8 inches long.

Sori: Boine under the recurved edges of the leaves.

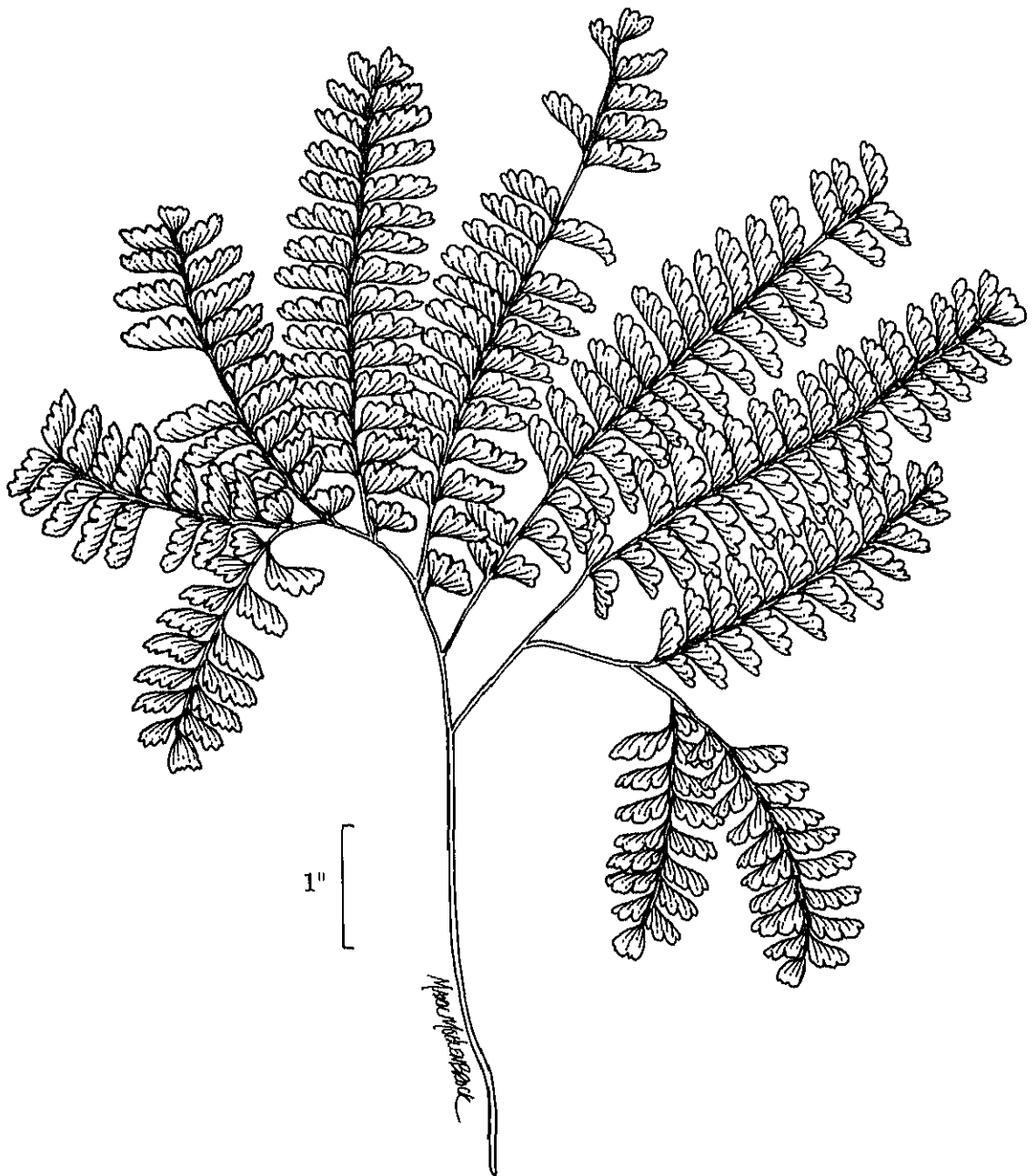
Northern Maiden-hair Fern

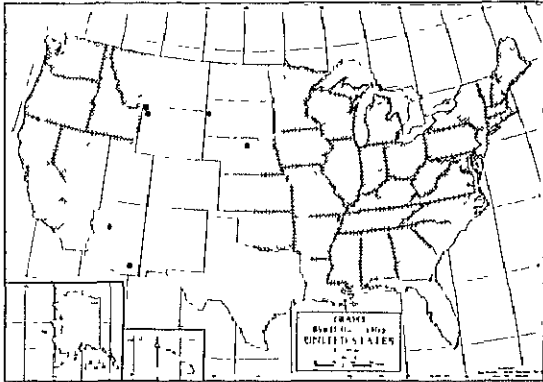
Adiantum pedatum L.

Family: Fern (Polypodiaceae)

Spores: June-September

Field Marks: This distinctive fern has purple-black leaf stalks and the leaf segments oblong and asymmetrical, with the upper edge of each leaf segment curved back over the spore-bearing structures.





Local Notes:

Habitat: Rich woods, rocky ledges.

Habit: Erect perennial with slender rhizomes.

Stems: All stems underground, rhizomatous.

Leaves: Usually twice divided, formed along the upper side of a curved axis, each segment oblong and asymmetrical, usually with teeth and a few round lobes, thin and membranaceous, up to 1 inch long and up to 1 inch wide; stalks purple-black.

Spores: Formed in a line along the upper edge of the leaf and covered by the recurved edge of the leaf.

Notes: This fern derives its name of maidenhair from the leaf segments that have a resemblance to the leaves of the maidenhair, or ginkgo, tree.

Subarctic Lady Fern

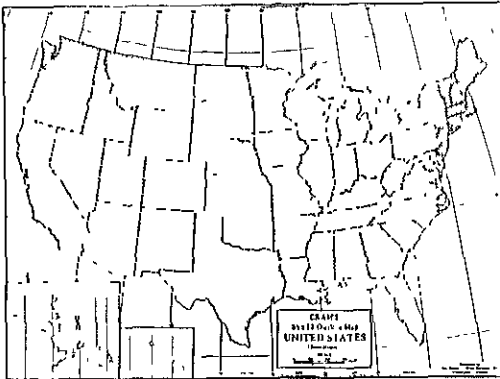
Athyrium filix-femina (L.) Roth

Family: Fern (Polypodiaceae)

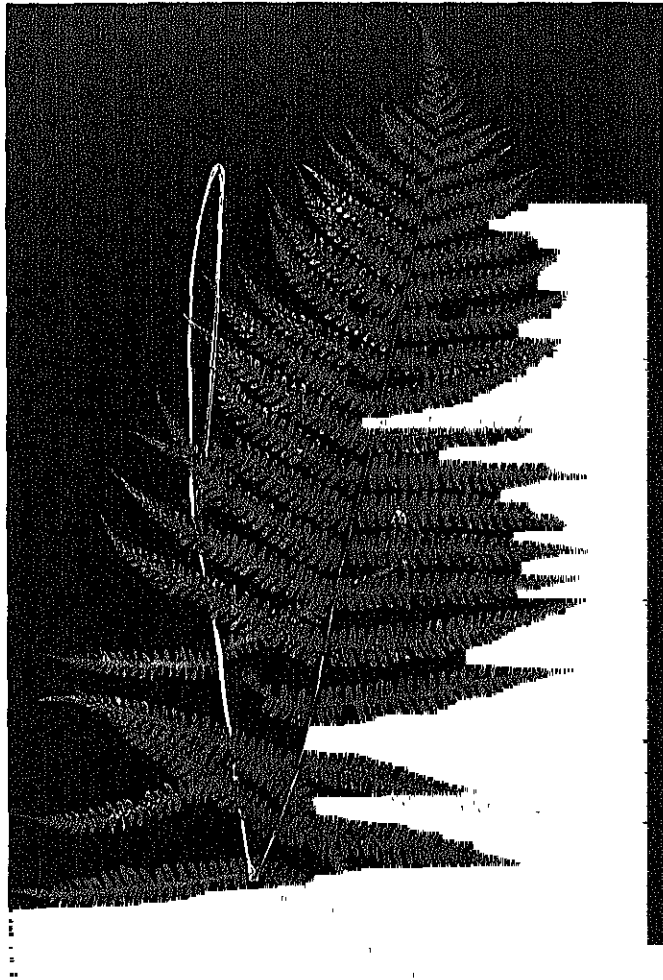
Spores: June-September

Field Marks: This fern is recognized by its much divided, membranaceous leaves and its elongated fruiting bodies (sori).





Local Notes:



Habitat: Rich woods, thickets, bogs, along streams.

Habit: Large, spreading fern with short rhizomes.

Stems: All underground as rhizomes.

Leaves: Divided as much as three times, up to 2 1/2 feet long, membranaceous, usually without hairs, each segment toothed or evenly shallow lobed; leaf stalks with brown scales up to 1/4 inch long.

Sori: Elongated, about 1/10 inch long, scattered on the lower surface of the leaf segments.

Notes: The common name used for this fern in this book is not particularly appropriate.

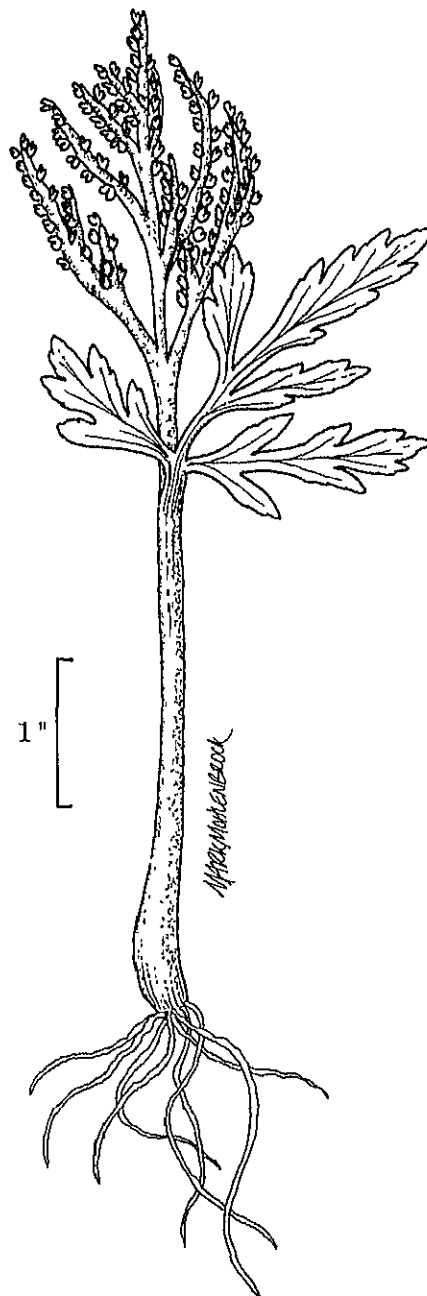
Triangle Moonwort

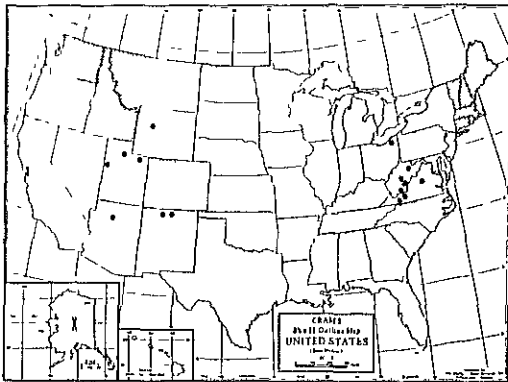
Botrychium lanceolatum (S.G. Gmel.) Rupr.

Family: Adder's-tongue (Ophioglossaceae)

Spores: May-June

Field Marks: This *Botrychium* has smooth buds, and the sterile triangular leaf bends downward before it is fully mature.





Local Notes:

Habitat: Moist grassy or rocky areas.

Habit: Perennial fern with an erect rhizome.

Stems: Upright, rather stout, up to 1 foot tall, smooth; buds not hairy.

Leaves: Sterile blade triangular, pinnately divided, sessile, the segments linear-lanceolate to oblong, pointed at the tip, smooth, bent downward until fully mature.

Sori: Spherical, borne in a terminal panicle at the top of the sterile leaf-bearing stem.

Notes: The young succulent stems of this fern may be eaten by mammals.

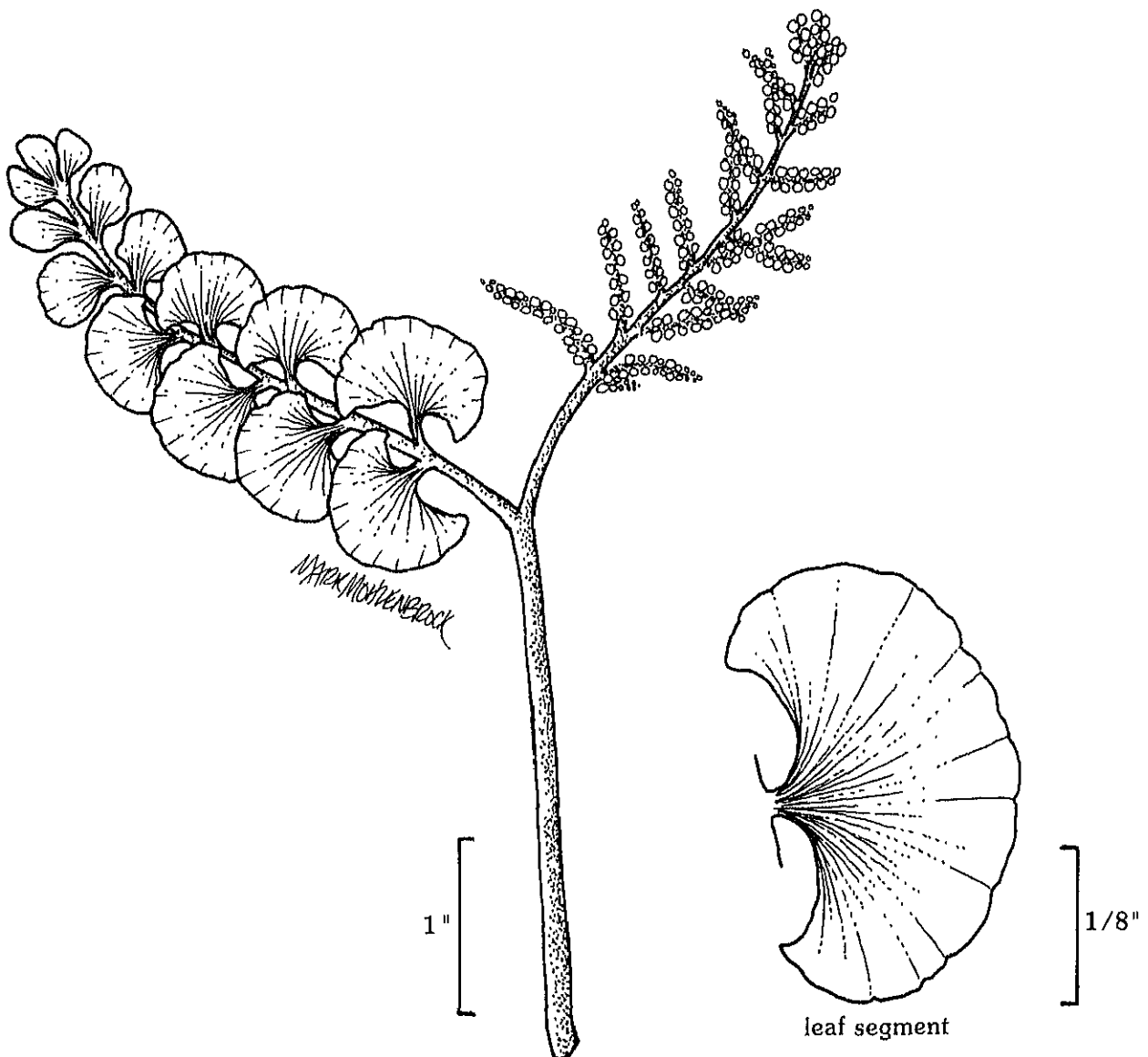
Moonwort

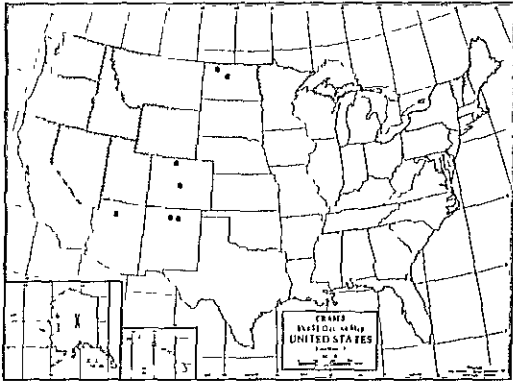
Botrychium lunaria (L.) Swartz

Family: Adder's-tongue (Ophioglossaceae)

Spores: May-June

Field Marks: This fern is readily recognized by its simple, reniform (moon-shaped) leaf segments.





Local Notes:



Habitat: Wet meadows, moist fields.

Habit: Perennial fern with an erect rhizome

Stems: Upright, rather stout, up to 1 foot tall, smooth; buds not hairy.

Leaves: Sterile blade borne halfway up the stem, up to 5 inches long, divided into 10-16 reniform (moon-shaped) leaflets, the leaflets shallowly toothed or lobed, smooth.

Sori: Spherical, borne in a narrow spike up to 4 inches long.

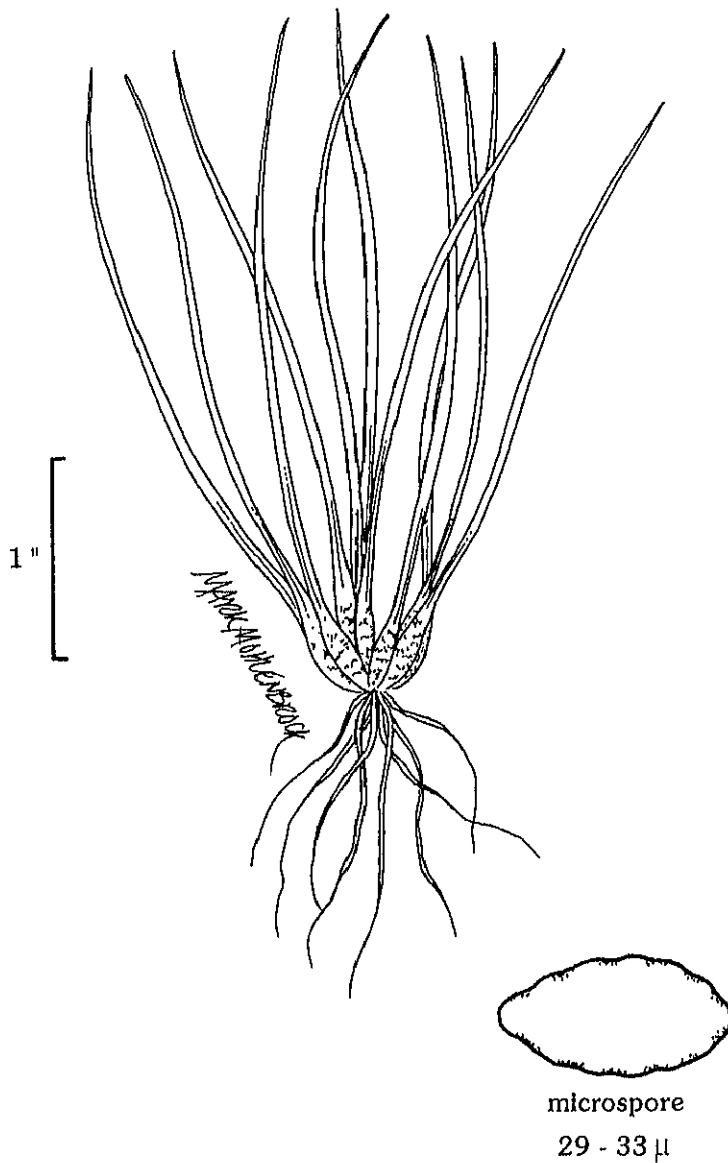
Spiny-spore Quillwort

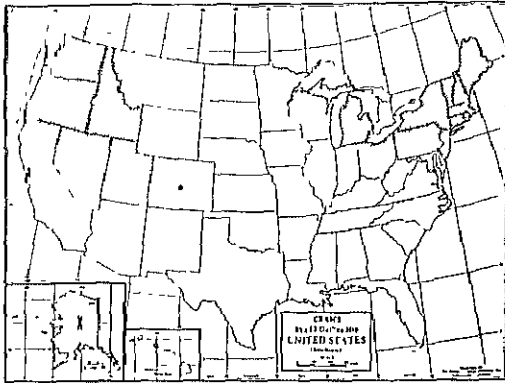
Isoetes echinospora Durieu

Family: Quillwort (Isoetaceae)

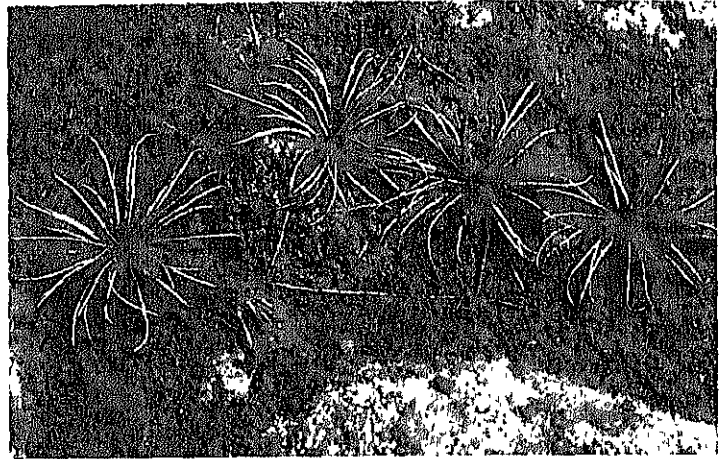
Spores: May-June

Field Marks: This always submersed quillwort has coarse leaves not more than 3 1/2 inches long.





Local Notes:



Habitat: Lakes.

Habit: Submersed perennial plant with a 2-lobed corm.

Stems: Underwater as a 2-lobed corm.

Leaves: Elongated, grass-like, coarse, up to 30 in number, up to 3 1/2 inches long, swollen at the base to contain the sporangia.

Sporangia: Borne within the swollen, paler base of each leaf.

Spores: White or cream-colored with minute spines (when viewed through a microscope).

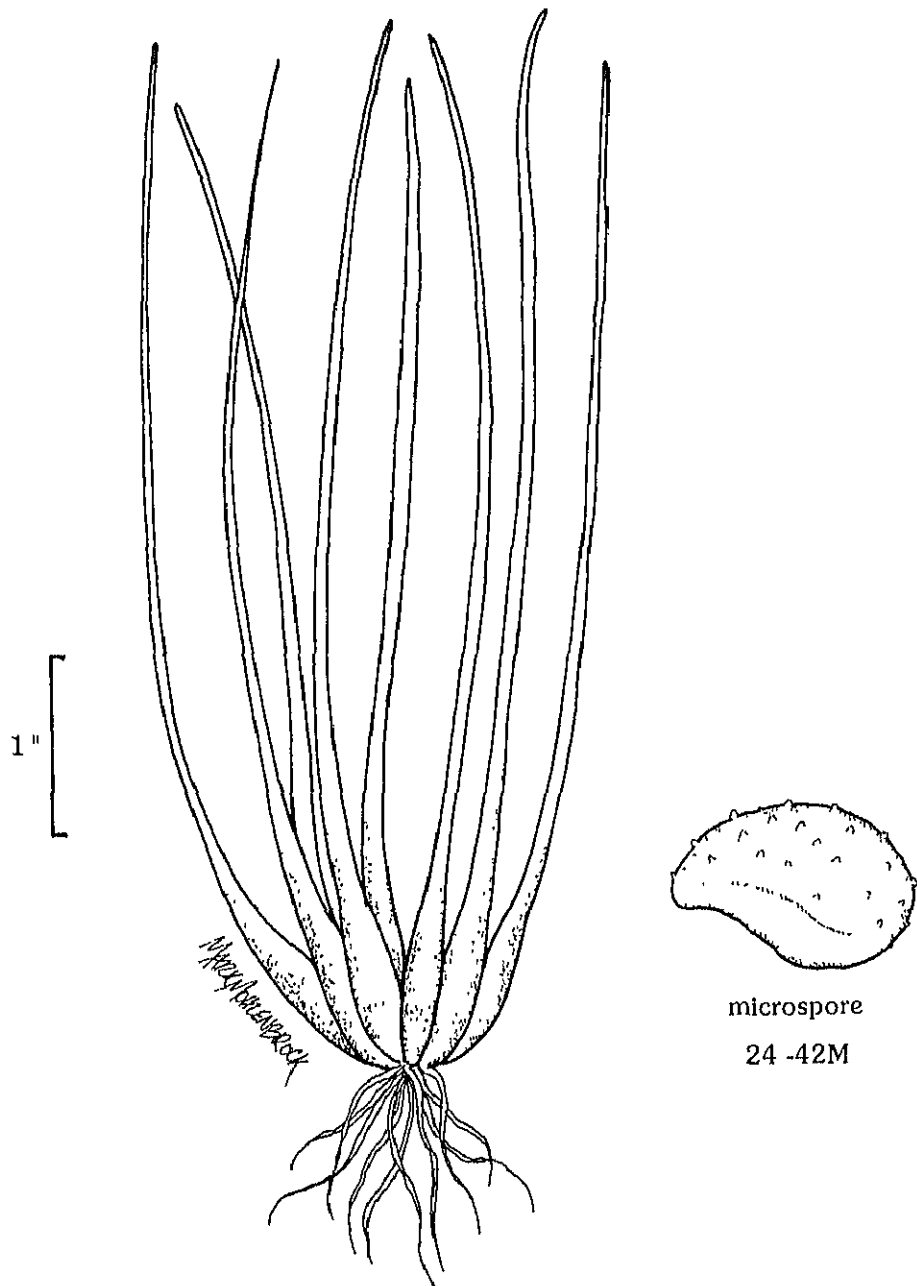
Western Quillwort

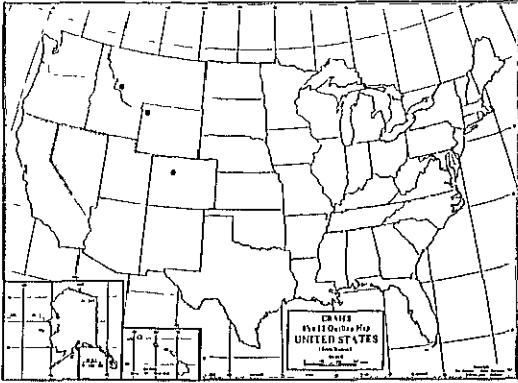
Isoetes lacustris L.

Family: Quillwort (Isoetaceae)

Spores: May-June

Field Marks: This quillwort is almost always found submersed in water. It has extremely long leaves, as much as 8 inches long.





Local Notes:

Habitat: Lakes in the mountains.

Habit: Submersed perennial plant with a 2-lobed corm.

Stems: Underwater as a 2-lobed corm.

Leaves: Elongated, grass-like, up to 30 in number, dark green, up to 8 inches long, swollen at the base to contain the sporangia.

Sporangia: Borne within the swollen, paler base of each leaf.

Spores: Cream-colored with minute spines (when viewed through a microscope).

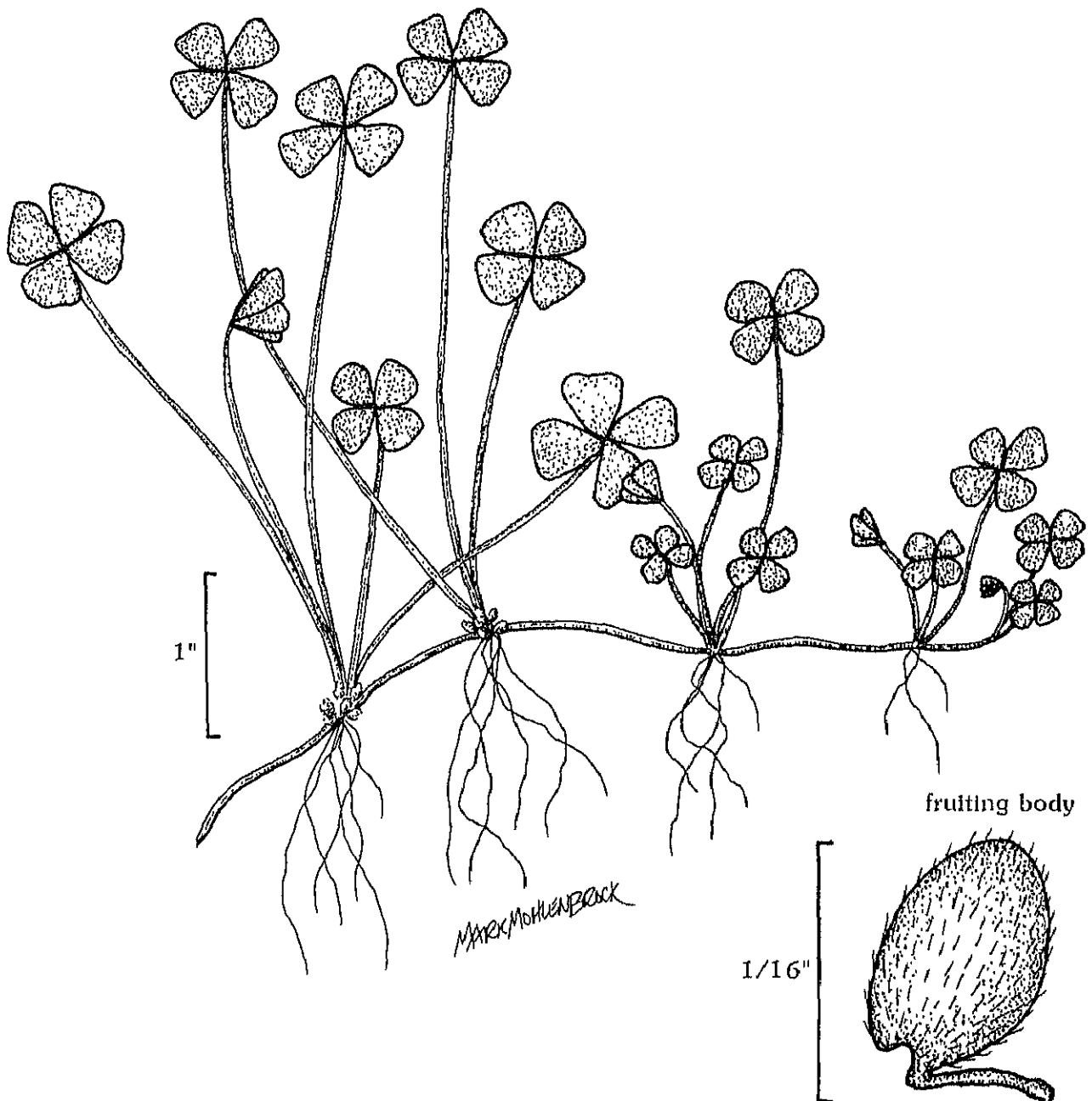
Hairy Water Fern

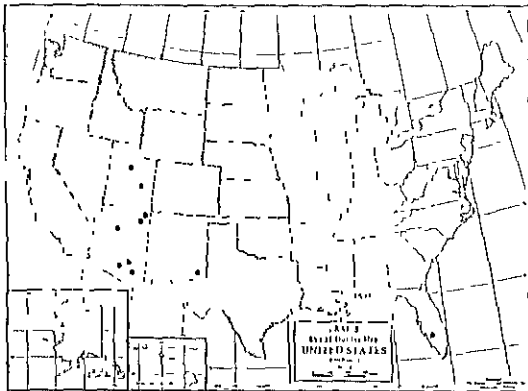
Marsilea vestita Hook. & Grev.

Family: Water Fern (Marsileaceae)

Spores: May-October

Field Marks: This aquatic fern is readily recognized by its four-leaf clover shaped leaves and the hairy fruiting bodies.





Local Notes:

Habitat: Ponds, pools, creeks, roadside ditches, usually in shallow water.

Habit: Perennial fern with slender, branching rhizomes.

Stems: All under water as rhizomes.

Leaves: Divided into 4 leaflets resembling a four-leaf clover, each leaflet shaped like an upside-down triangle, up to 1 inch long, up to 1 inch wide, without teeth, smooth or hairy.

Sori: Borne in hard, ellipsoid structures (sporocarps), each sporocarp solitary on stalks attached to the rhizomes, up to 1/3 inch long, up to 1/8 inch thick, with short, appressed hairs.

Notes: Plants stranded on land tend to be much hairier than those that live in water.

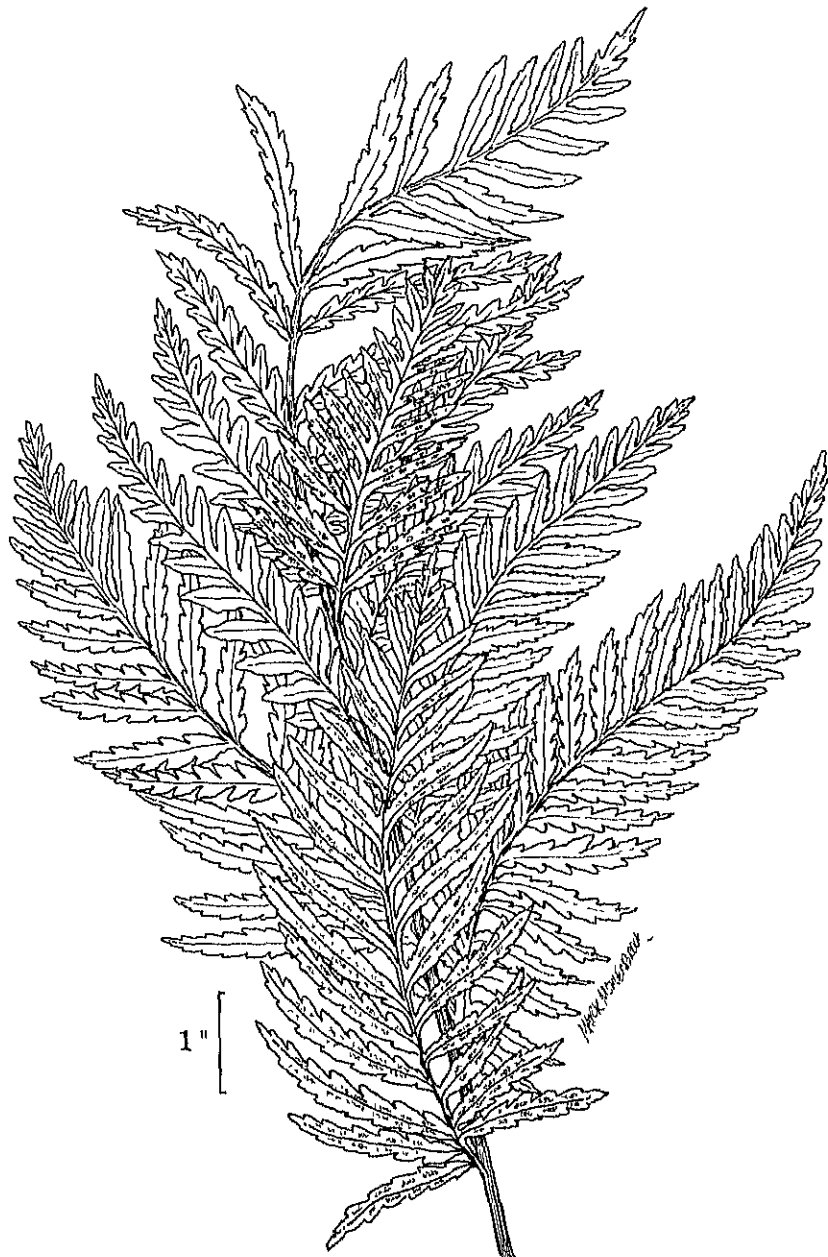
Giant Chainfern

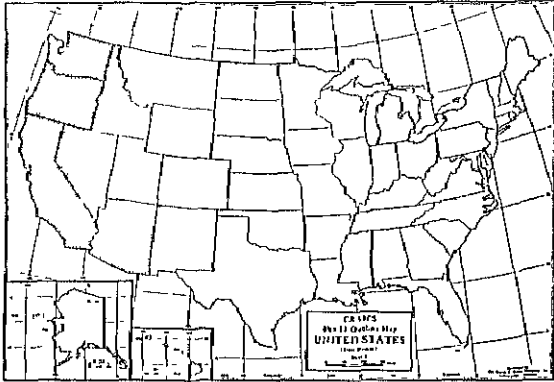
Woodwardia fimbriata J.E. Smith

Family: Fern (Polypodiaceae)

Spores: May-June

Field Marks: This fern is recognized by its large pinnate-pinnatifid leaves and its elongated sori borne in two rows that parallel the vein.





Local Notes:

Habitat: Along streams, moist woods, bogs, springs.

Habit: Perennial fern with a stout, woody, shiny, brown rhizome.

Stems: All underground as rhizomes.

Leaves: Upright, up to 9 feet tall, often forming a circle, pinnately divided, with each segment further deeply divided, the segments pointed at the tip, with minutely spiny teeth, smooth or with resin glands.

Sori: Elongated, borne in 2 rows, 1 on either side of the vein.

GROUP 2

Grasses

GROUP 2

GROUP 2

GROUP 2

GROUP 2

Grasses

GROUP 2

Grasses

Slender Wheatgrass

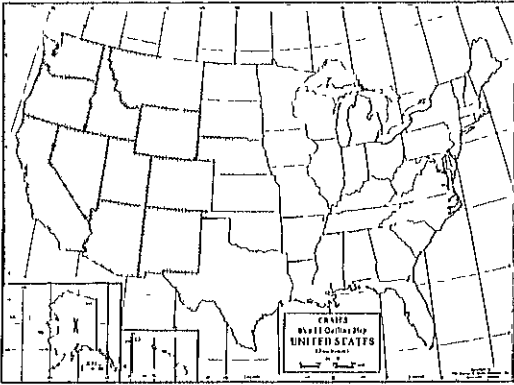
Agropyron trachycaulum (Link) Malte ex H.F. Lewis

Family: Grass (Gramineae)

June-August

Field Marks: Most of the spikelets of this species are 3- to 5-flowered. Slender wheatgrass lacks rhizomes, has very short-awned glumes or no glumes at all, and has glumes at least 2/3 as long as the spikelets.





Local Notes:



Habitat: Most moist areas.

Habit: Tufted perennial grass with short rhizomes.

Stems: Upright, unbranched, hollow, up to 3 1/2 feet tall, without hairs.

Leaves: Elongated, flat, 1/4-1/2 inch wide, rough to the touch; ligules up to 1/3 inch long, minutely hairy.

Flowers: Borne in spikelets, with numerous spikelets crowded into narrow, often spike-like panicles, the "spikes" sometimes interrupted; spikelets 1-flowered; glumes green or purplish, pointed or even slightly awned at the top; lemma awned, the awn 1/8-1/4 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Narrowly oblongoid, smooth.

Notes: This is a very important range grass for domestic livestock.

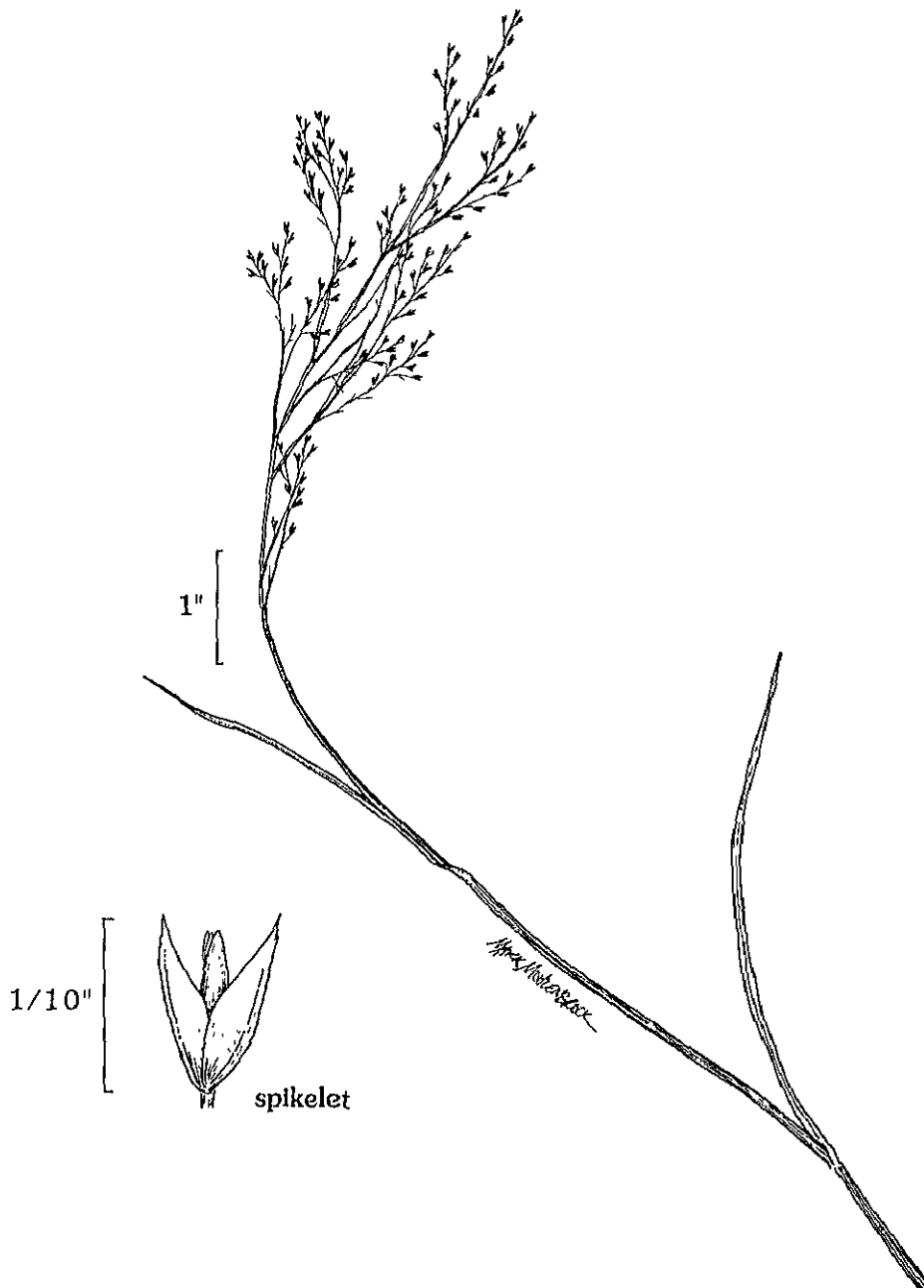
Idaho Bentgrass

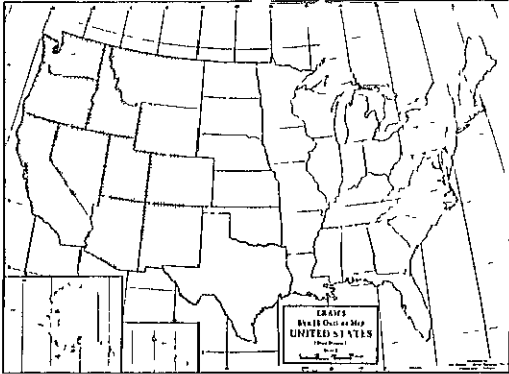
Agrostis idahoensis Nash

Family: Grass (Gramineae)

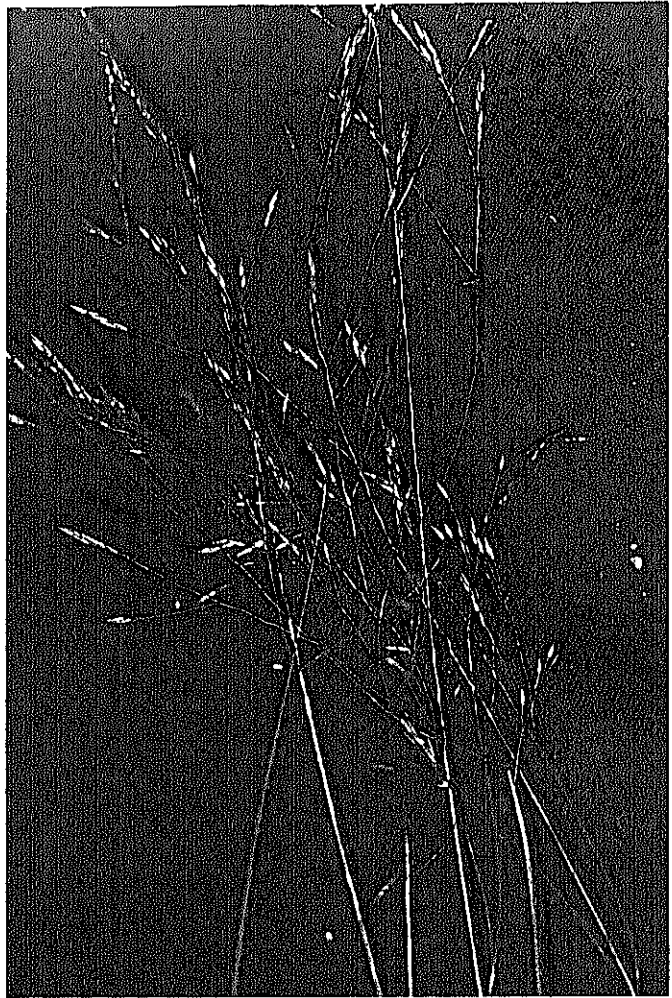
July-August

Field Marks: Like most species of *Agrostis*, this one also has 1-flowered spikelets borne in open panicles with thread-like branches, and narrow leaves. It differs from other species in the genus by the branches of the panicle not spikelet-bearing at the base and the awnless lemma





Local Notes:



Habitat: Wet meadows, in bogs.

Habit: Tufted perennial grass with fibrous roots.

Stems: Upright, slender, hollow, up to 21 inches tall, without hairs.

Leaves: Elongated, narrow, flat or rolled into a tube, up to 1/12 inch wide, without hairs.

Flowers: Borne in 1-flowered spikelets, the spikelets arranged in an open panicle up to 5 inches long, with the panicle branches thread-like and not bearing spikelets at their base; spikelets 1/10-1/8 inch long; glumes and lemma without hairs and awnless.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Very tiny, smooth.

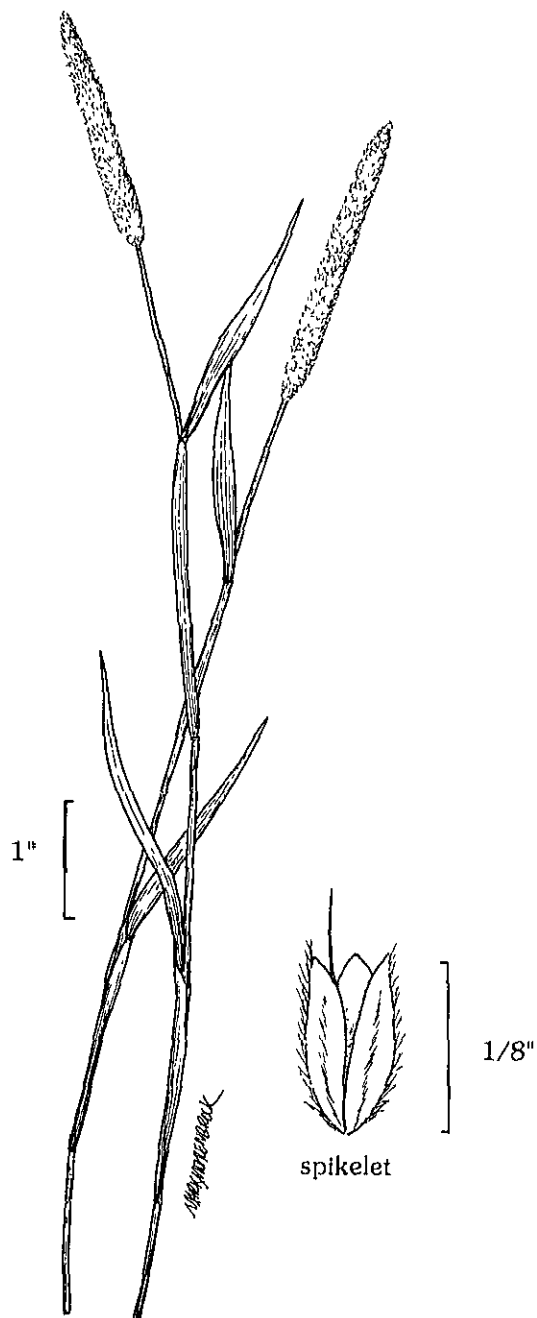
Short-awn Foxtail

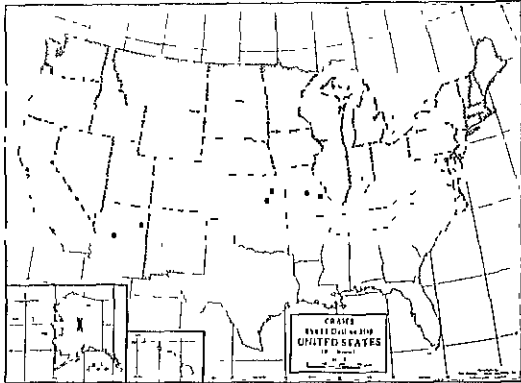
Alopecurus aequalis Sobol.

Family: Grass (Gramineae)

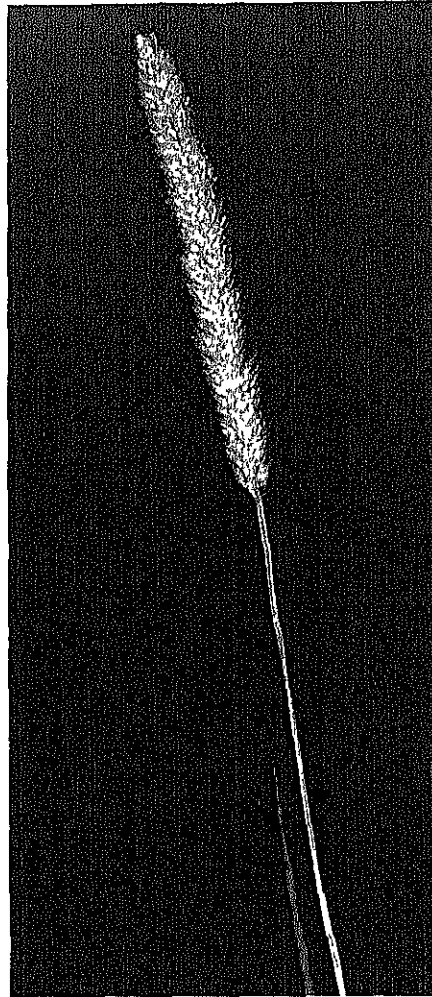
June-August

Field Marks: The single spikes of this grass are cylindrical and several times longer than broad. The spike is not "fuzzy". The awn of the lemma is only about 1/3 inch long.





Local Notes:



Habitat: Wet meadows, marshes, along streams, around ponds and lakes.

Habit: Perennial herb with fibrous roots.

Stems: Spreading to ascending, often rooting at the nodes, up to 1 1/2 feet tall, smooth.

Leaves: Elongated, up to 1/6 inch wide, without hairs but usually rough to the touch on both surfaces, ligules up to 1/3 inch long

Flowers: Borne in spikelets, with several spikelets crowded into a long cylindrical spike at the tip of the stem; spikes up to 3 inches long, up to 1/4 inch wide; spikelets 1-flowered; glumes sparsely hairy; lemmas smooth, with an awn arising from about the middle of the lemma, up to 1/3 inch long

Sepals: 0

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ellipsoid, smooth

Notes: This grass is foraged by domesticated livestock.

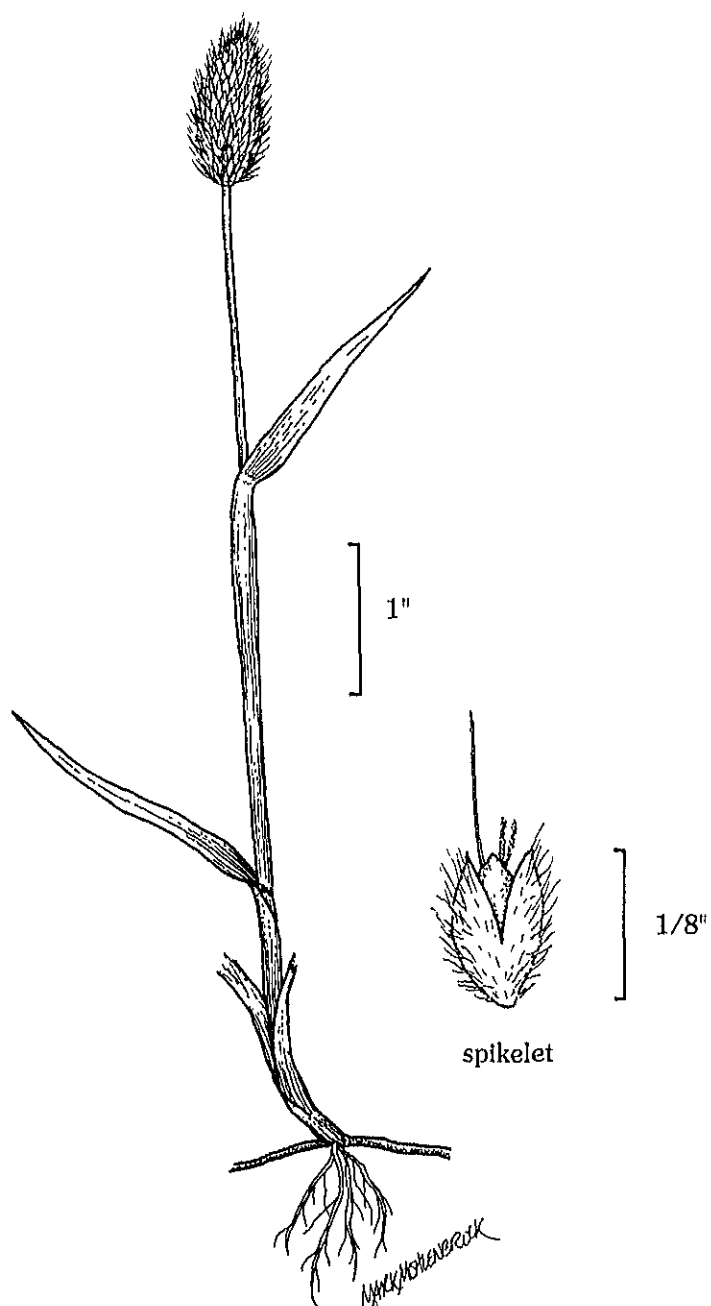
Mountain Foxtail

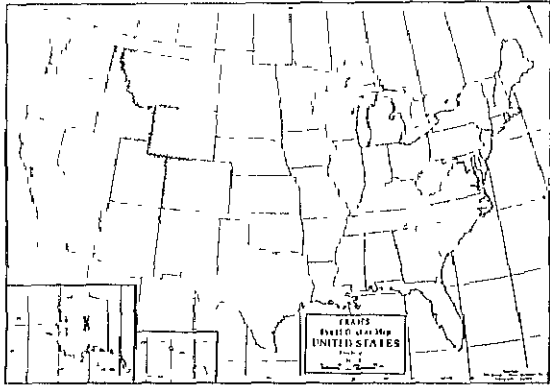
Alopecurus alpinus J.E. Smith

Family: Grass (Gramineae)

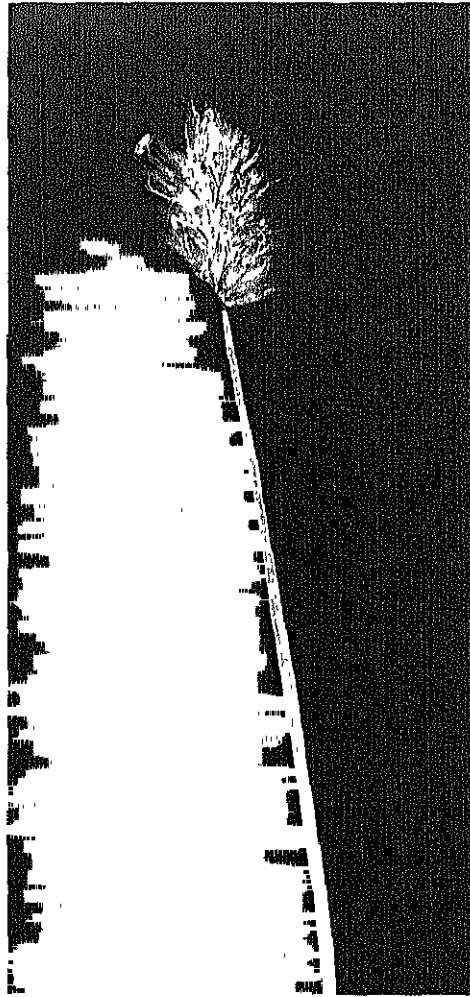
June-August

Field Marks: This species has a short, "fuzzy" head not more than 1 1/2 inches long at the tip of each stem.





Local Notes:



Habitat: Wet meadows, along streams, mostly in the high mountains.

Habit: Perennial herb with short rhizomes and sometimes with stolons.

Stems: Upright, unbranched, up to 2 1/2 feet tall, smooth.

Leaves: Elongated, narrow, up to 1/4 inch wide, without hairs but rough to the touch on both surfaces.

Flowers: Borne in spikelets, with several spikelets crowded into a "fuzzy" head at the tip of the stem; heads up to 1 1/2 inches long, up to 1/2 inch wide, spikelets 1-flowered; glumes densely long-hairy; lemmas with an awn up to 1/3 inch long, the awn arising from below the middle of the lemma.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth.

Giant Reed

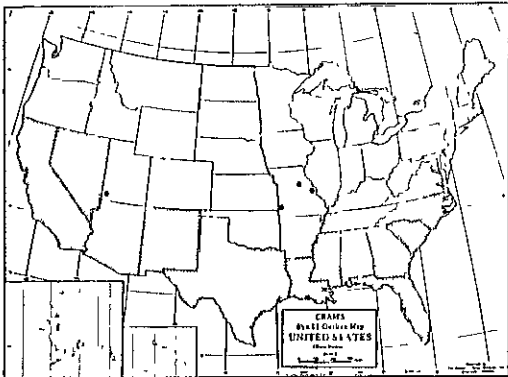
Arundo donax L.

Family: Grass (Gramineae)

August-October

Field Marks: This giant grass differs from the somewhat similar common reed (*Phragmites australis*) by being larger in all aspects and by having hairy lemmas in the spikelets





Local Notes:

Habitat: Moist, disturbed soil, often along roads and in irrigation ditches.

Habit: Giant clump-forming perennial with stout, knotty rhizomes.

Stems: Upright, very stout, hollow, up to 20 feet tall.

Leaves: Elongated, flat, up to 3 1/2 inches wide, heart-shaped and with tufts of hairs at the base.

Flowers: Borne in spikelets, the spikelets arranged in dense, plume-like spikes up to 2 feet long and up to 10 inches thick, each spikelet several-flowered, about 1/2 inch long; lemmas hairy, tipped with a short awn.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ovoid, smooth.

Notes: This giant grass is native to Europe and has been planted in the United States as an ornamental which occasionally escapes into generally moist habitats.

American Sloughgrass

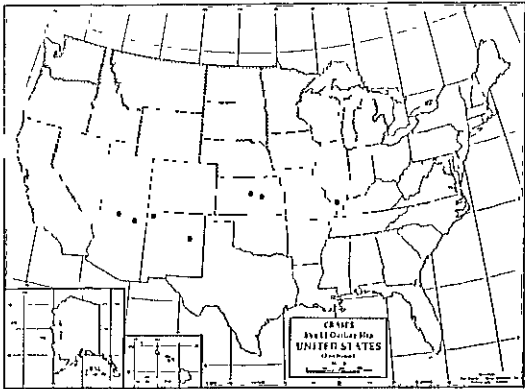
Beckmannia syzigachne (Steud.) Fernald

Family: Grass (Gramineae)

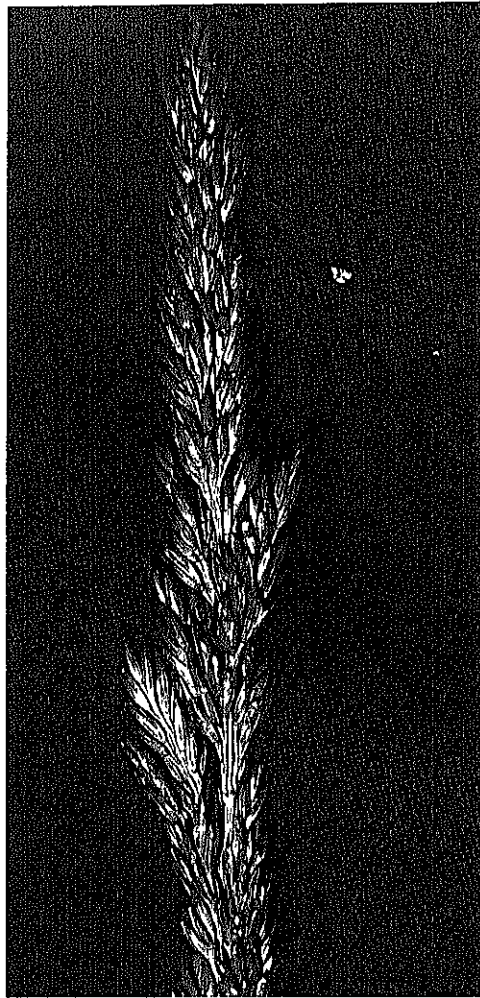
July-August

Field Marks: This distinctive grass has narrow panicles that consist of many crowded, 1-flowered, round spikelets, with broad, compressed, 3-veined glumes, pointed lemmas, flat leaves up to 1/2 inch wide, and ligules at least 1/4 inch long.





Local Notes:



Habitat: Wet meadows, marshes, boggy areas

Habit: Tufted perennial with slender rhizomes

Stems: Upright, up to 3 1/2 feet tall, rough to the touch.

Leaves: Elongated, narrow, flat or rolled up, 1/10-1/6 inch wide, rough to the touch.

Flowers: 1 per spikelet, with many spikelets arranged in a narrow, dense panicle, the panicle up to 6 inches long; spikelets up to 1/4 inch long; lemmas with an awn about as long as the glumes.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Smooth.

Notes: The grains are eaten by waterfowl.

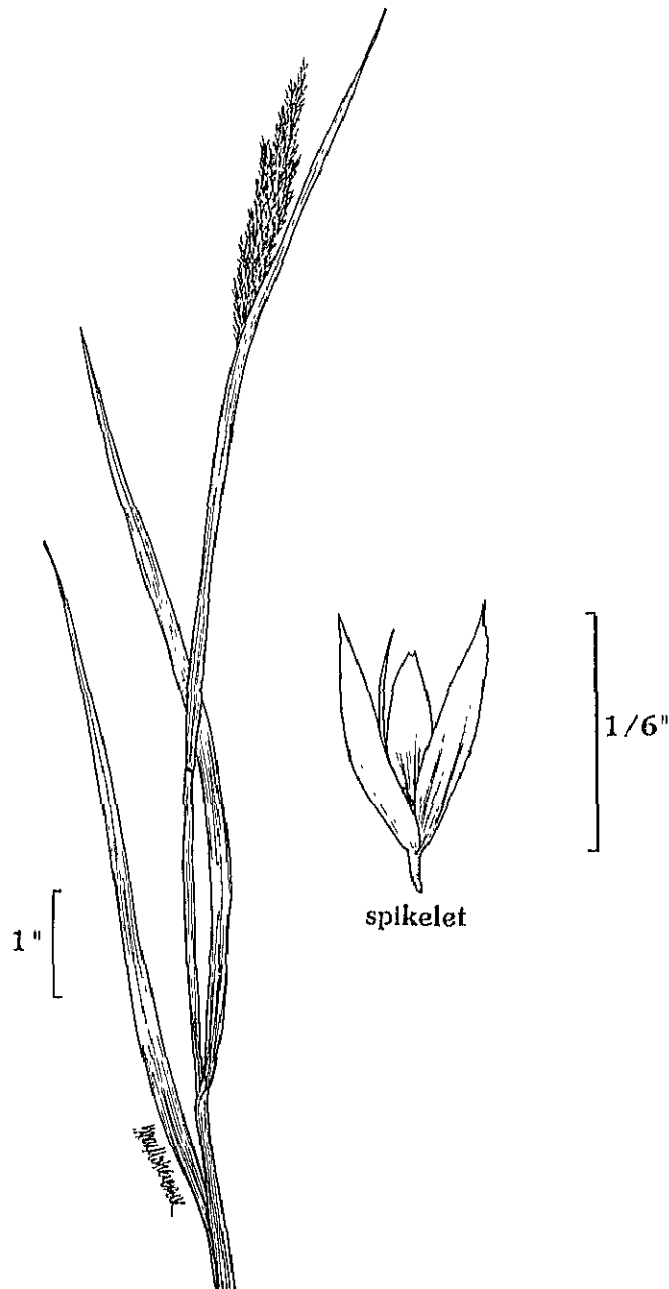
Slimstem Reedgrass

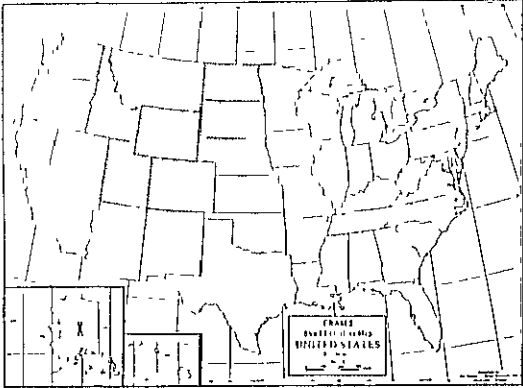
Calamagrostis neglecta (Ehrh.) P. Gaertn., B. Meyer & Scherb.

Family: Grass (Gramineae)

July-August

Field Marks: The 1-flowered spikelets of this grass have short, straight awns and glumes that are up to 1/6 inch long. The panicles are narrow and contracted. The lemma has a tuft of hairs at the base.





Local Notes:



Habitat: Along streams, around ponds and lakes, usually in water.

Habit: Aquatic perennial with rhizomes.

Stems: Decumbent and rooting at the nodes, later becoming upright, branched or unbranched, hollow, up to 2 feet tall, smooth.

Leaves: Alternate, elongated, flat, up to 1/2 inch wide, smooth; ligules up to 1/3 inch long.

Flowers: Borne in usually 2-flowered spikelets, the spikelets arranged in open panicles up to 10 inches long; each spikelet up to 1/6 inch long; glumes and lemmas toothed at the tip, smooth.

Sepals: 0.

Petals: 0.

Stamens: 3.

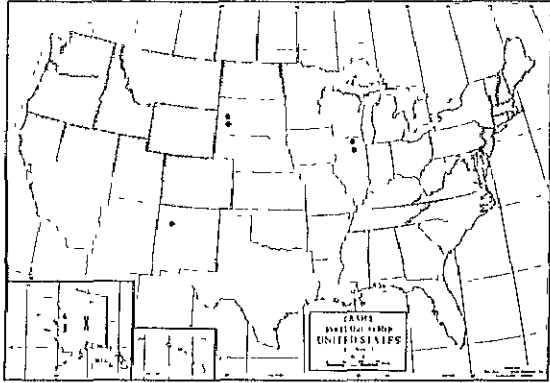
Pistils: Ovary superior, smooth.

Grains: Oval, flat, brown.

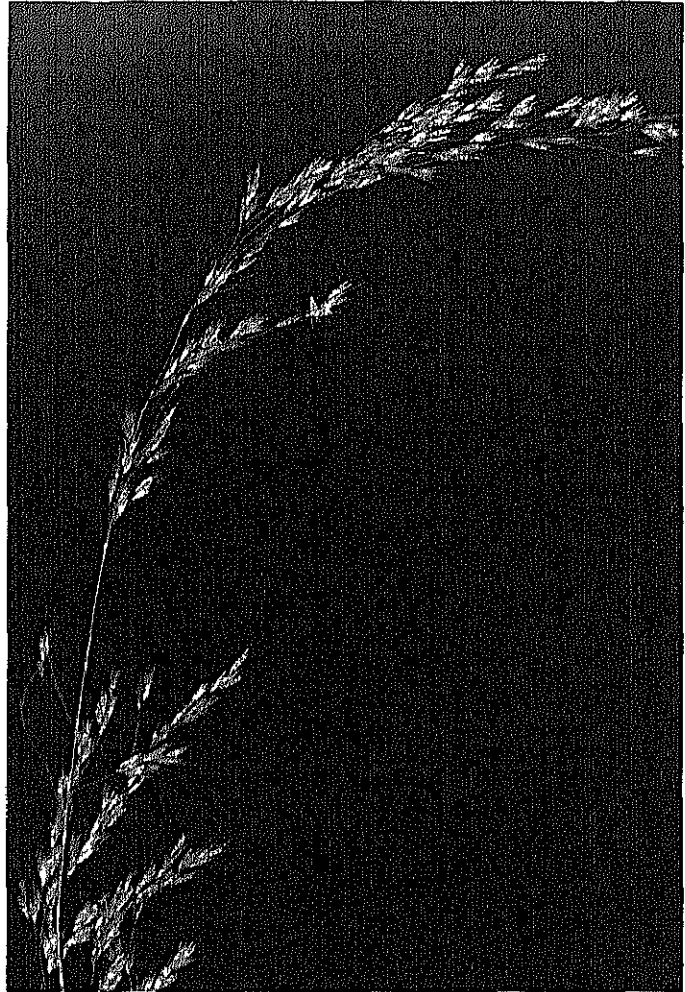
Notes: The grains are eaten by waterfowl.

Cinna latifolia (Trevir.) Griseb.

July-August[illegible]



Local Notes:



Habitat: Along streams, in wet meadows, damp woods, around springs.

Habit: Perennial grass with thickened rhizomes.

Stems: Upright, unbranched, hollow, up to 6 feet tall, without hairs.

Leaves: Elongated, up to 3/4 inch wide, flat, somewhat rough to the touch; ligules up to 1/3 inch long, jagged at the tip.

Flowers: Borne in spikelets, with many spikelets in an open panicle with thread-like branches; panicles up to 1 foot long; spikelets 1-flowered, up to 1/4 inch long; glumes narrow, lanceolate, rough to the touch; lemmas narrow, lanceolate, rough to the touch, with a short awn.

Sepals: 0.

Petals: 0.

Stamens: 1-3.

Pistils: Ovary superior, smooth.

Grains: Ovoid, smooth.

Notes: The grains are eaten by ducks and other birds.

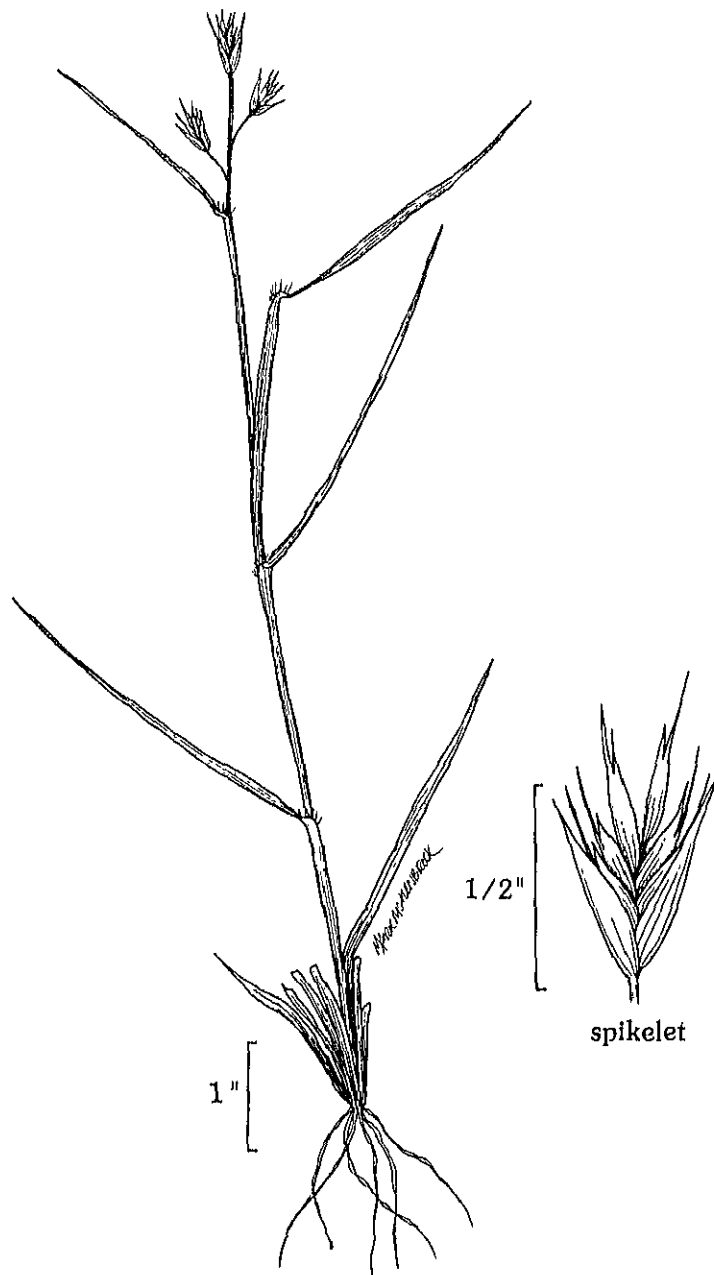
California Oatgrass

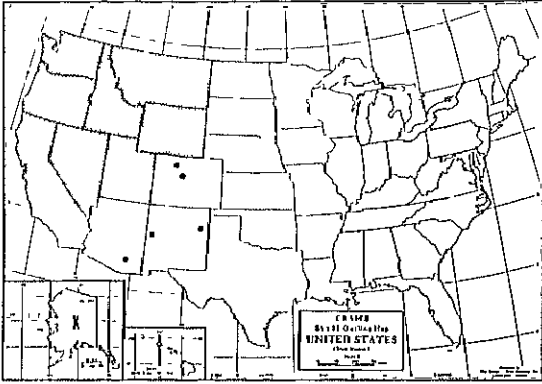
Danthonia californica Boland.

Family: Grass (Gramineae)

May-August

Field Marks: This grass has small panicles that consist of only 3-5 spikelets. The 1/2-inch long lemmas are hairy near the base and bear a twisted awn 1/3-1/2 inch long.





Local Notes:



Habitat: Meadows and open hillsides.

Habit: Densely tufted perennial with fibrous roots and last year's brown leaf sheaths persistent at base of plant.

Stems: Upright, hollow, up to 3 feet tall, smooth.

Leaves: Elongated, flat or sometimes rolled into a tube, up to 10 inches long, up to 1/6 inch wide, rough to the touch and usually with a few long hairs along the margins; sheaths with a few long hairs at the tip.

Flowers: Borne in 5- to 8-flowered, usually purple, spikelets, with 3-5 spikelets arranged in a small panicle up to 3 inches long; branches of the panicles usually hairy; glumes 1/2-3/4 inch long, smooth or slightly rough; lemmas 1/3-1/2 inch long, hairy near the base, with a twisted awn 1/3-1/2 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth.

Notes: The grains are eaten by small birds and mammals.

Tufted Hairgrass

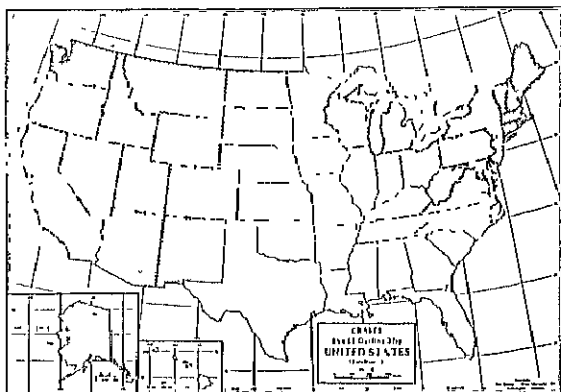
Deschampsia cespitosa (L.) Beauv.

Family: Grass (Gramineae)

July-September

Field Marks: Species of *Deschampsia* have narrow leaves clustered at the base of the plant and delicately awned lemmas. *Deschampsia cespitosa* differs from other species in the genus by its perennial habit, its open panicles, and its leaves usually 1/16 inch wide or wider.





Local Notes:



Habitat: Wet meadows, wet prairies, ditches, along streams, around lakes, particularly at high elevations.

Habit: Densely tufted perennial with short rhizomes.

Stems: Upright, smooth, up to 3 feet tall.

Leaves: Elongated, very narrow, mostly crowded near the base of the plant, flat or folded or even sometimes rolled up, 1/16-1/8 inch wide, rough to the touch.

Flowers: Usually 2 per spikelet, with many spikelets arranged in loose, often nodding panicles with thread-like branches, the panicle up to 8 inches long; spikelets usually purplish, shiny; lemmas with a slender awn up to 1/4 inch long.

Sepals: 0.

Petals: 0

Stamens: 3.

Pistils: Ovary superior.

Grains: Smooth.

Notes: This species provides cover for quail and other birds.

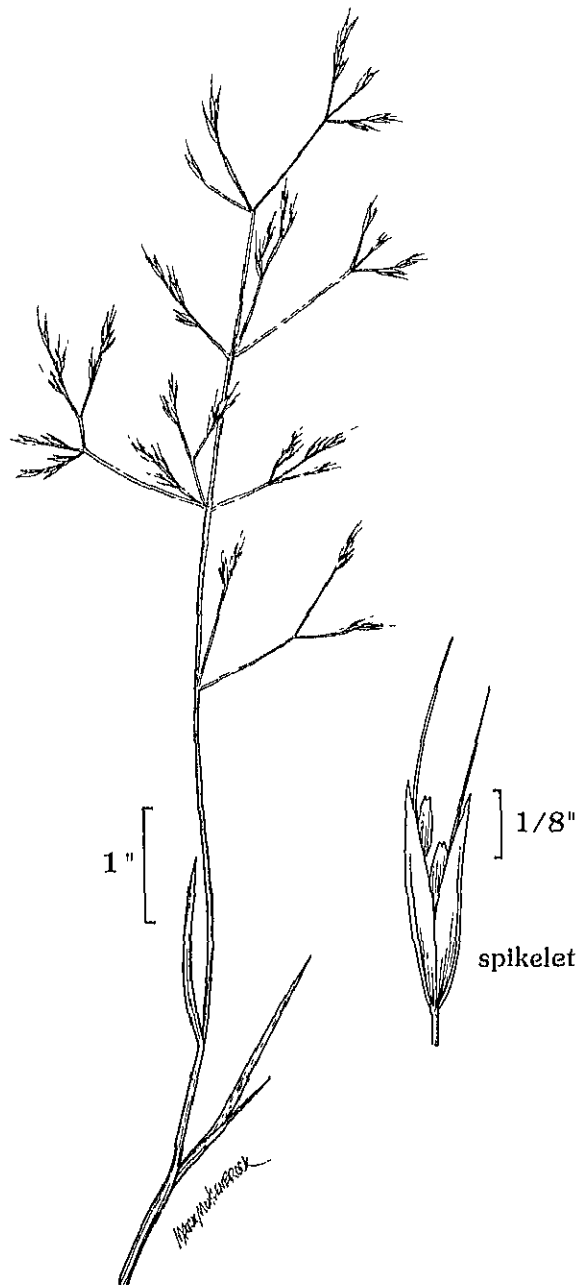
Annual Hairgrass

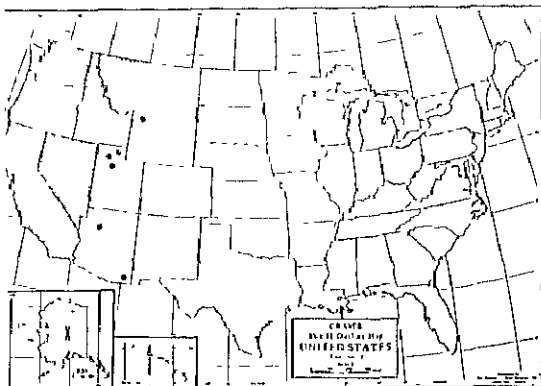
Deschampsia danthonioides (Trin.) Munro

Family: Grass (Gramineae)

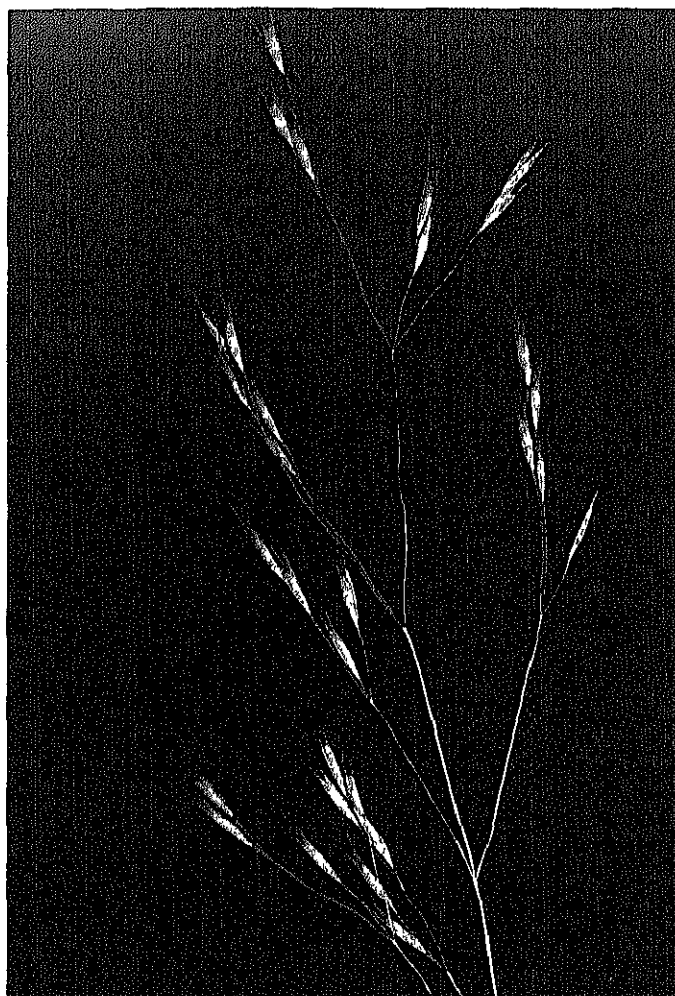
June-August

Field Marks: This slender annual grass usually has 2-flowered spikelets borne in narrow panicles, with the lemmas only about 1/8 inch long and rounded and shallowly toothed at the tip.





Local Notes:



Habitat: Along streams, in meadows, mud flats, vernal pools.

Habit: Tufted annual with fibrous roots

Stems: Slender, upright, hollow, unbranched, up to 1 1/2 feet tall, smooth.

Leaves: Elongated, thread-like, up to 4 inches long, about 1/20 inch wide.

Flowers: Borne in 2-flowered spikelets, the spikelets arranged in narrow panicles up to 8 inches long; glumes up to 1/3 inch long, pointed at the tip; lemmas only about 1/8 inch long, rounded and shallowly toothed at the tip, with hairs at the base.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth.

Notes: The grains are eaten by waterfowl.

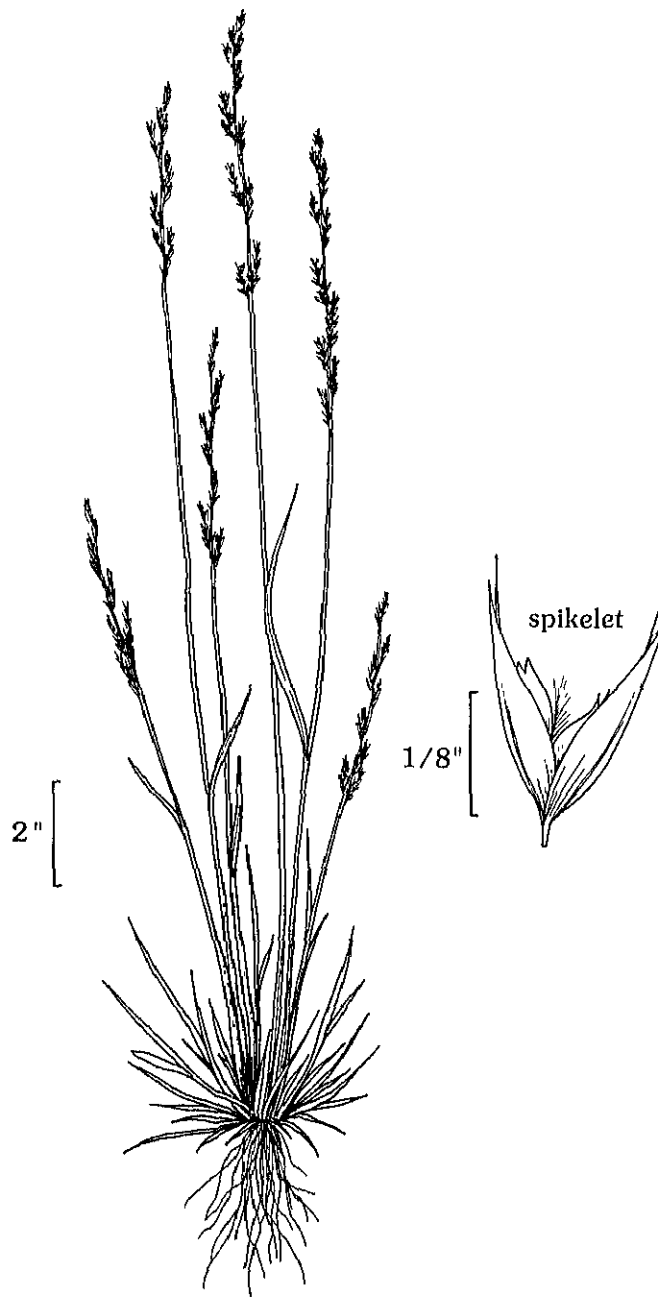
Slender Hairgrass

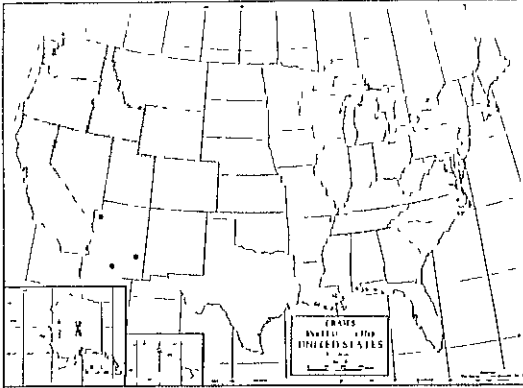
Deschampsia elongata (Hook.) Munro

Family: Grass (Gramineae)

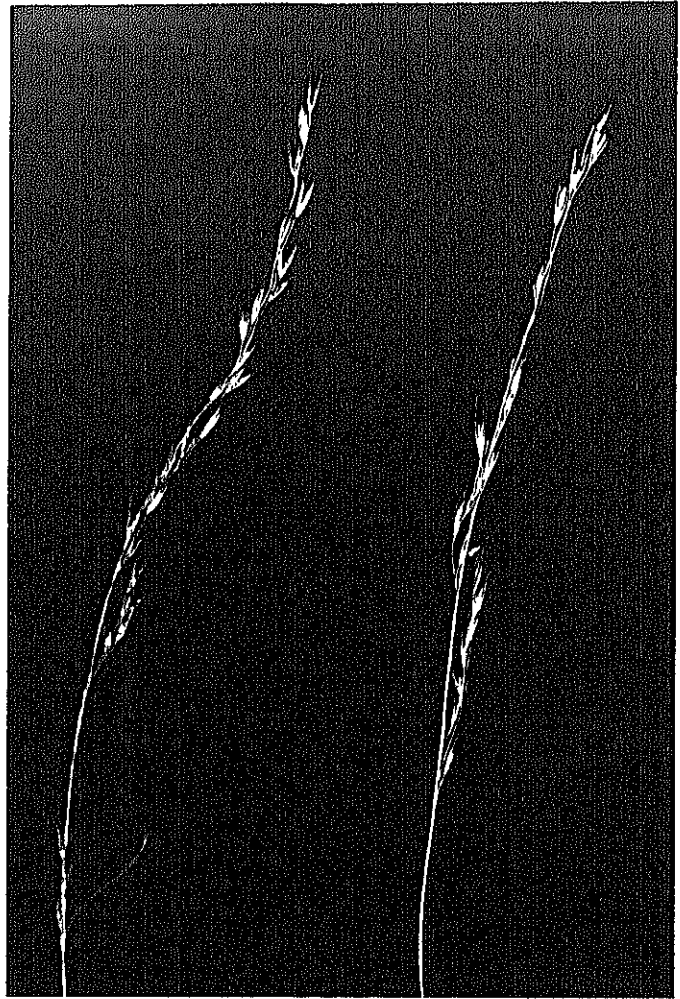
June-August

Field Marks: The field characteristics of this grass are the very narrow leaves crowded at the base of the plant, the narrow panicle with strongly ascending branches, and the lemmas that have a tuft of hairs at the base and a slender awn that is attached below the middle of the lemma.





Local Notes:



Habitat: Wet meadows, along streams, around ponds and lakes.

Habit: Tufted perennial with fibrous roots.

Stems: Upright, slender, hollow, unbranched, up to 2 feet tall, not hairy.

Leaves: Most of them crowded at the base of the plant, thread-like, up to 4 inches long, about 1/20 inch wide; those on the stem linear, to 1/4 inch wide.

Flowers: Borne in 2- or 3-flowered spikelets, the spikelets arranged in narrow panicles with ascending, thread-like branches, the panicles up to 12 inches long; glumes up to 1/3 inch long, hairy; lemmas up to 1/8 inch long, with a tuft of hairs at the base and a slender awn up to 1/4 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ovoid, smooth.

Notes: This grass may be used as nesting cover for quail and other birds.

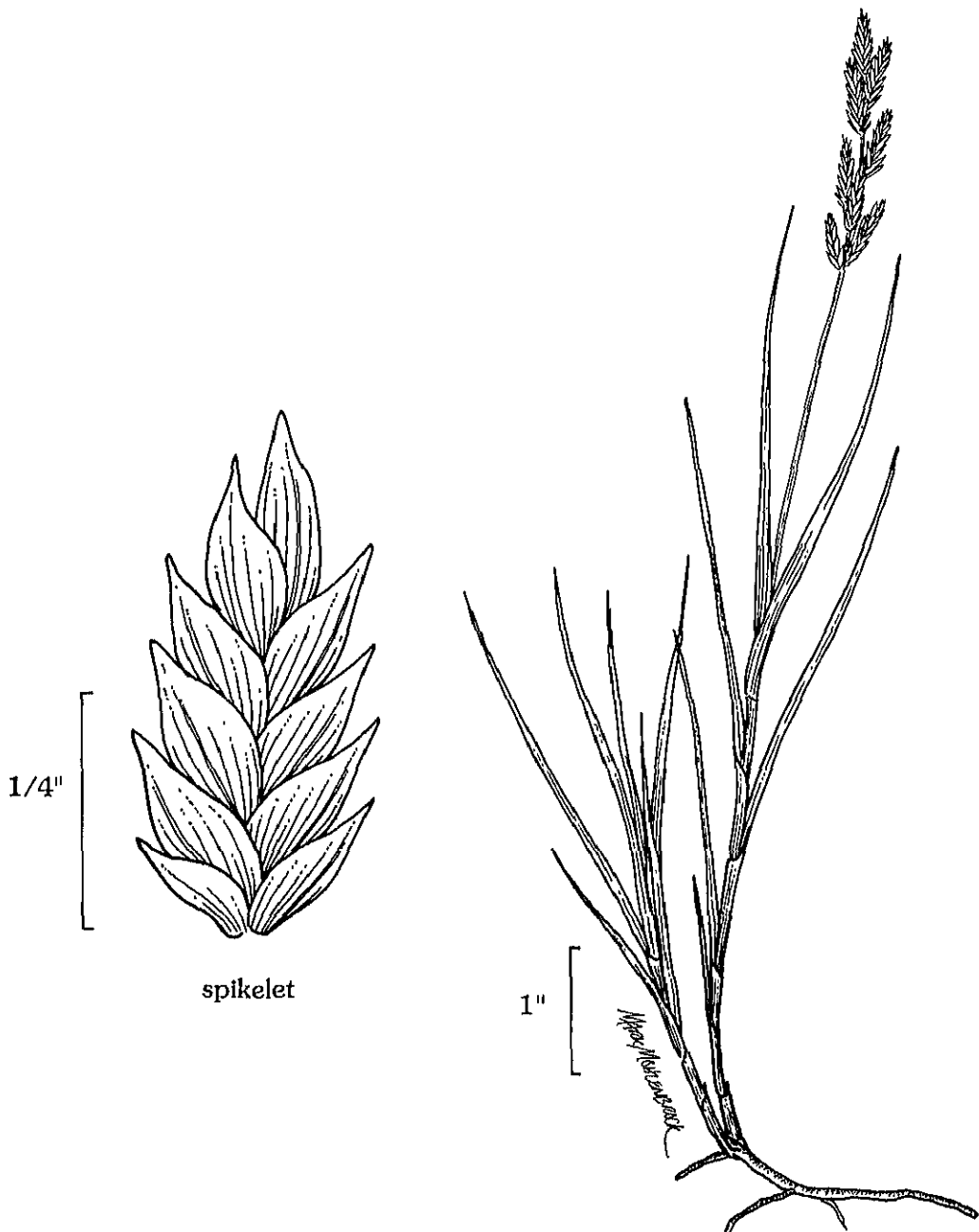
Inland Saltgrass

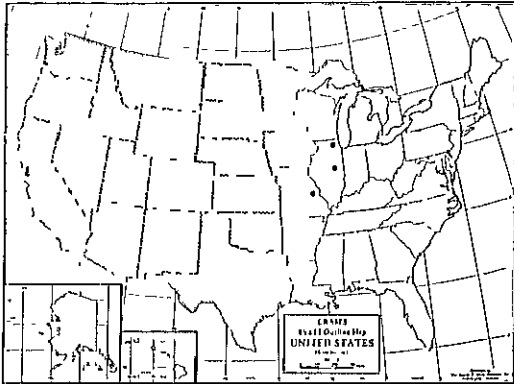
Distichlis stricta (Torr.) Scribn.

Family: Grass (Gramineae)

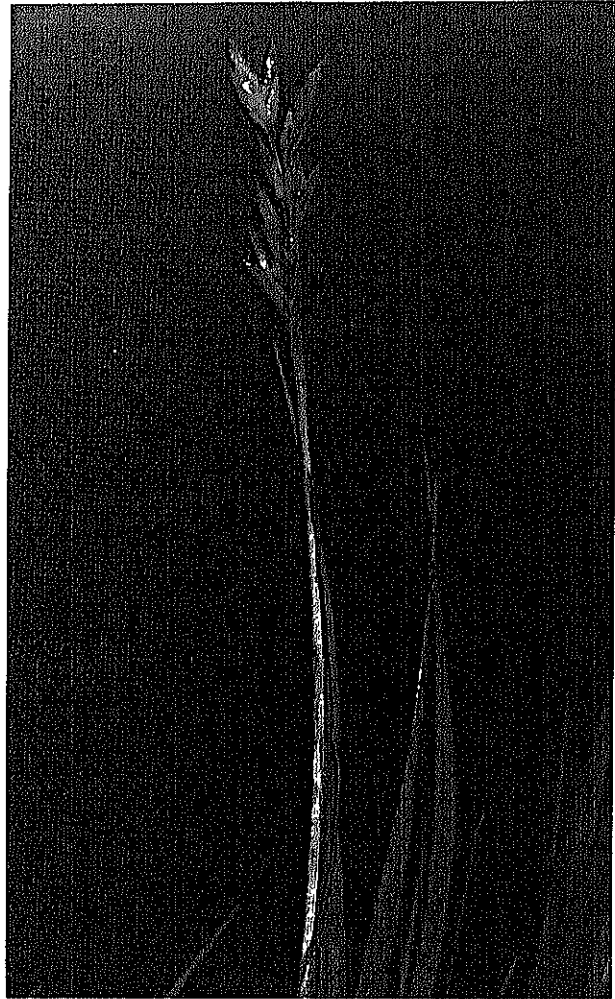
May-August

Field Marks: This grass is distinguished by its 5- to 15-flowered spikelets that are unisexual, with the two sexes borne on separate plants, and by its sod-forming habit in salty and alkaline areas.





Local Notes:



Habitat: Salt marshes, alkaline flats, along roads.

Habit: Perennial grass from extensive, much branched rhizomes.

Stems: Mat-forming, but with ascending stems up to 15 inches tall, smooth, stiff.

Leaves: Narrow, elongated, flat to rolled into a tube, long-tapering to the tip, up to 1/8 inch wide, rough to the touch.

Flowers: 5-15 flowers in a spikelet, with male flowers in separate spikelets on separate plants from the female; spikelets many in a short panicle up to 3 inches long; each spikelet up to 3/4 inch long; glumes and lemmas straw-colored, without awns.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Smooth.

Notes: The female plants usually have shorter stems than the male plants. There is disagreement as to whether this plant is specifically different from *D. spicata*.

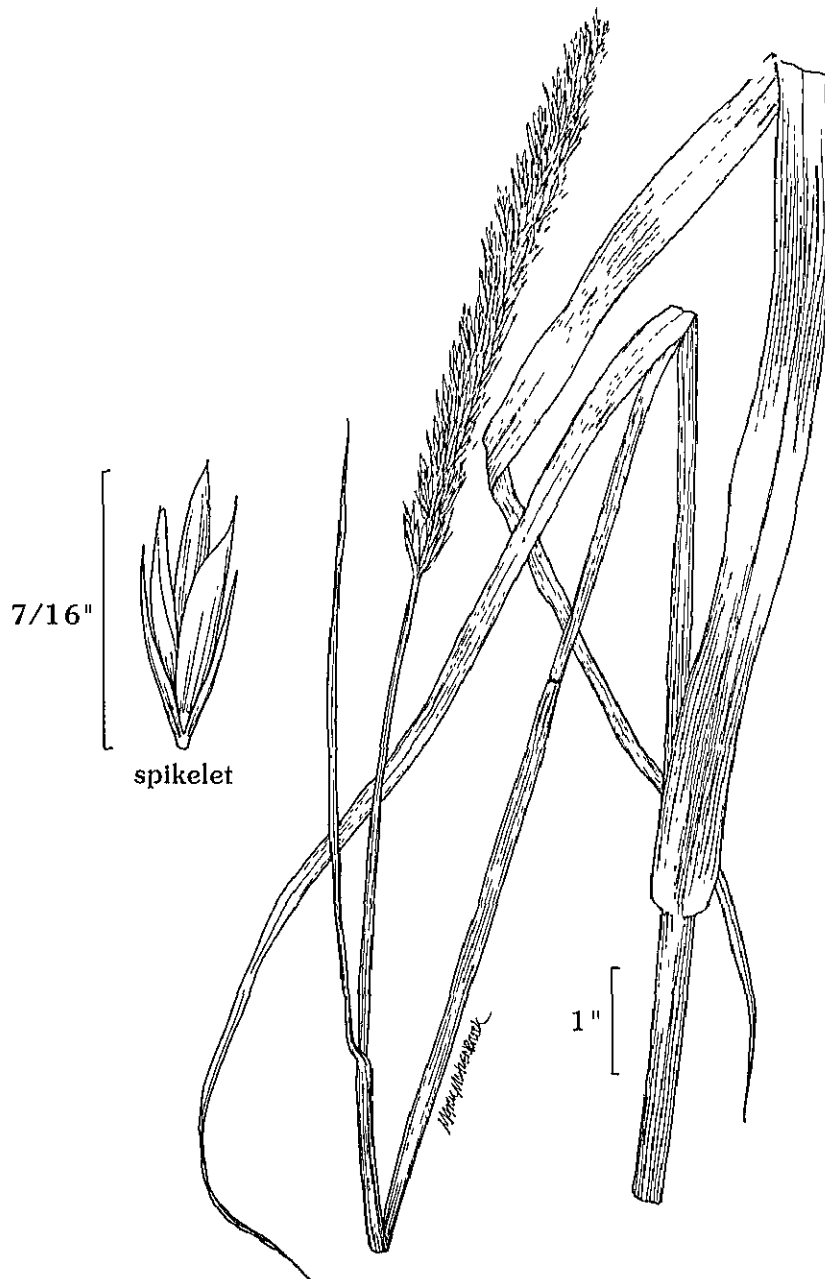
Basin Wild-rye

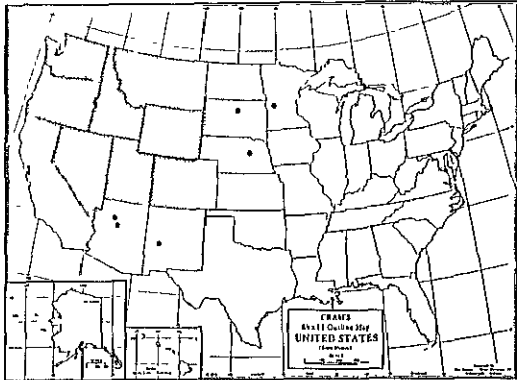
Elymus cinereus Scribn. & Merrill

Family: Grass (Gramineae)

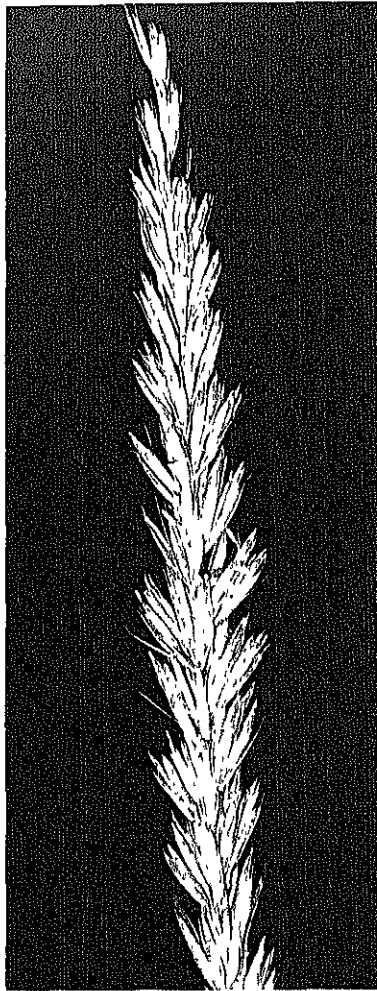
June-August

Field Marks: This grass forms large clumps and usually does not produce rhizomes. The glumes are awn-like and not broadened above the base. There are 3-6 spikelets at each node in the inflorescence. The leaves are 1/4-3/4 inch wide.





Local Notes:



Habitat: Along streams, in meadows, along roads, edge of woods, sagebrush areas.

Habit: Clump-forming perennial grass, usually without rhizomes.

Stems: Upright, unbranched, stout, hollow, up to 6 feet tall, smooth or rough-hairy.

Leaves: Elongated, 1/4-3/4 inch wide, hairy; ligules up to 1/3 inch long, membranaceous.

Flowers: Borne in spikelets, with 3-6 spikelets at a node, forming a spike up to 8 inches long, up to 1/2 inch broad; glumes awn-like, not broadened above the base; lemma usually hairy, with or without an awn up to 1/4 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Narrowly oblongoid, hairy at the tip.

Notes: This grass may be browsed by livestock. It is a good soil stabilizer and is used in new roadcuts. Black ergot, a fungus, is often present in the spikelets and can prove harmful to livestock.

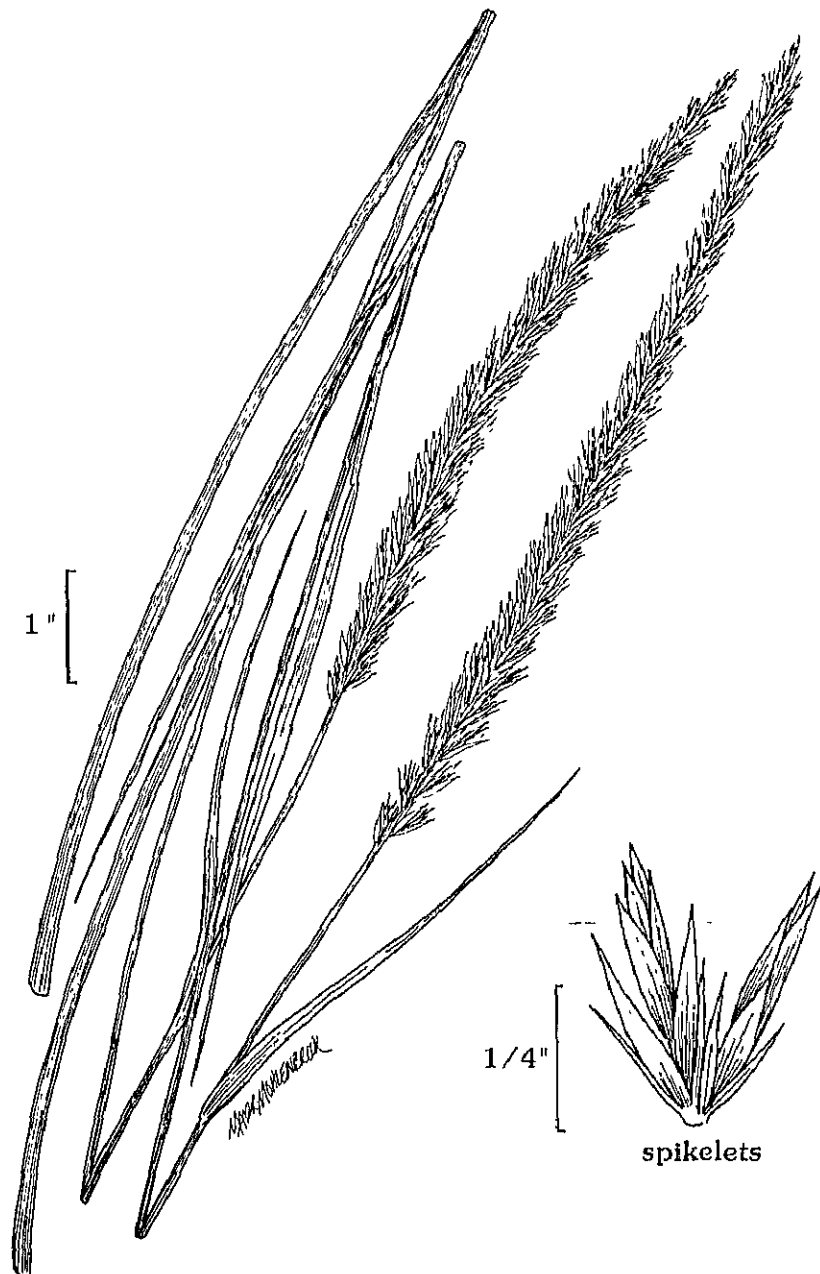
Creeping Wild-rye

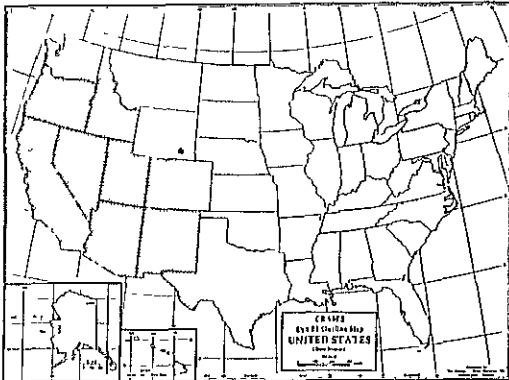
Elymus triticoides Buckley

Family: Grass (Gramineae)

May-August

Field Marks: This grass is unlike most others in the genus *Elymus* by its very slender and short spikes, its long-creeping rhizomes, its usually awnless lemmas, and its paired spikelets 1/2-3/4 inch long.





Local Notes:



Habitat: Meadows, damp ravines, often in salty areas.

Habit: Perennial herb from much branched rhizomes.

Stems: Upright, hollow, usually unbranched, up to 3 1/2 feet tall, smooth or slightly rough to the touch.

Leaves: Elongated, flat to rolled into a narrow tube, up to 1/3 inch wide, rough to the touch; ligules extremely short, with tiny cilia.

Flowers: Borne in spikelets, the spikelets usually paired and forming a slender spike up to 10 inches long; spikelets 3- to 8-flowered, 1/2-3/4 inch long; glumes slender-pointed, 1/6-1/3 inch long; lemmas less than 1/2 inch long, usually awnless.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Narrowly oblongoid, smooth except for a few hairs at the tip.

Notes: This plant produces viable seeds very irregularly. As a result, it has minimal value as a food for wildlife.

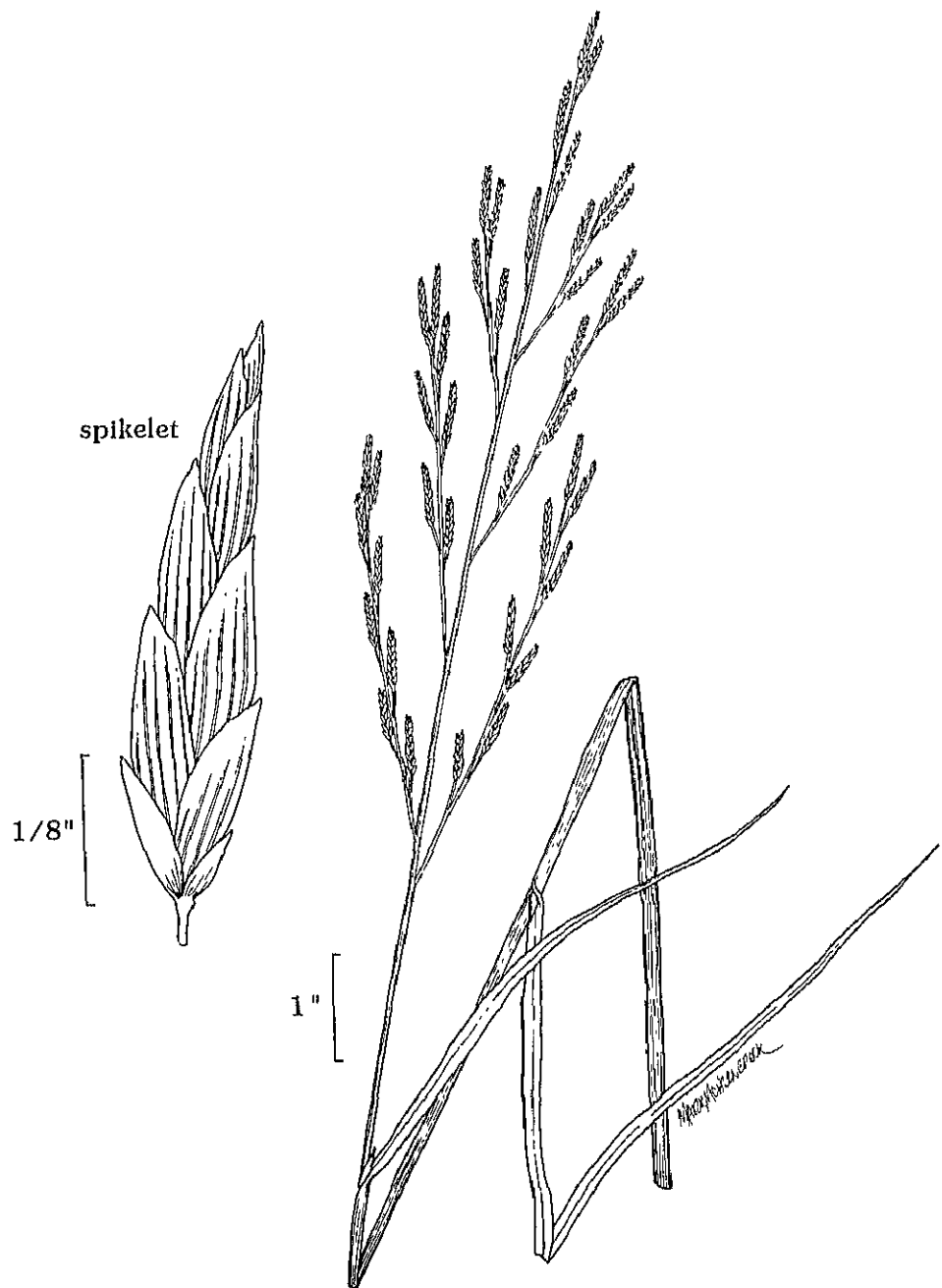
Small Floating Manna Grass

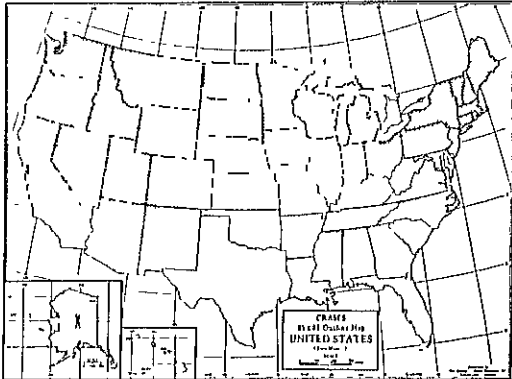
Glyceria borealis (Nash) Batch.

Family: Grass (Gramineae)

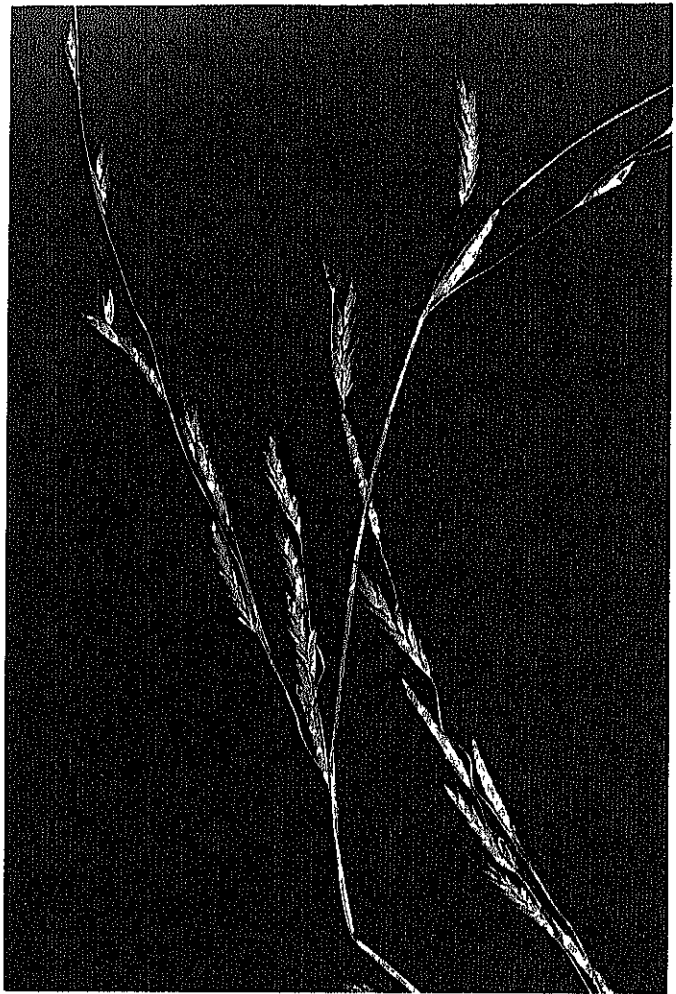
June-August

Field Marks: This grass has linear spikelets up to 3/4 inch long, with 8-12 flowers. The lemmas do not have hairs.





Local Notes:



Habitat: In shallow water of ponds and lakes and in wet meadows in the mountains.

Habit: Perennial grass with rhizomes.

Stems: Eventually upright, unbranched, hollow, up to 4 1/2 feet tall, without hairs.

Leaves: Elongated, flat or folded, 1/4-1/3 inch wide, smooth or rough to the touch; ligules up to 1/2 inch long.

Flowers: Borne in spikelets, with several spikelets in narrow panicles up to 1 1/2 feet long; spikelets 8- to 12-flowered, 1/2-3/4 inch long; glumes lanceolate, smooth; lemmas without hairs, 7-nerved.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth.

Notes: The grains are eaten by waterfowl.

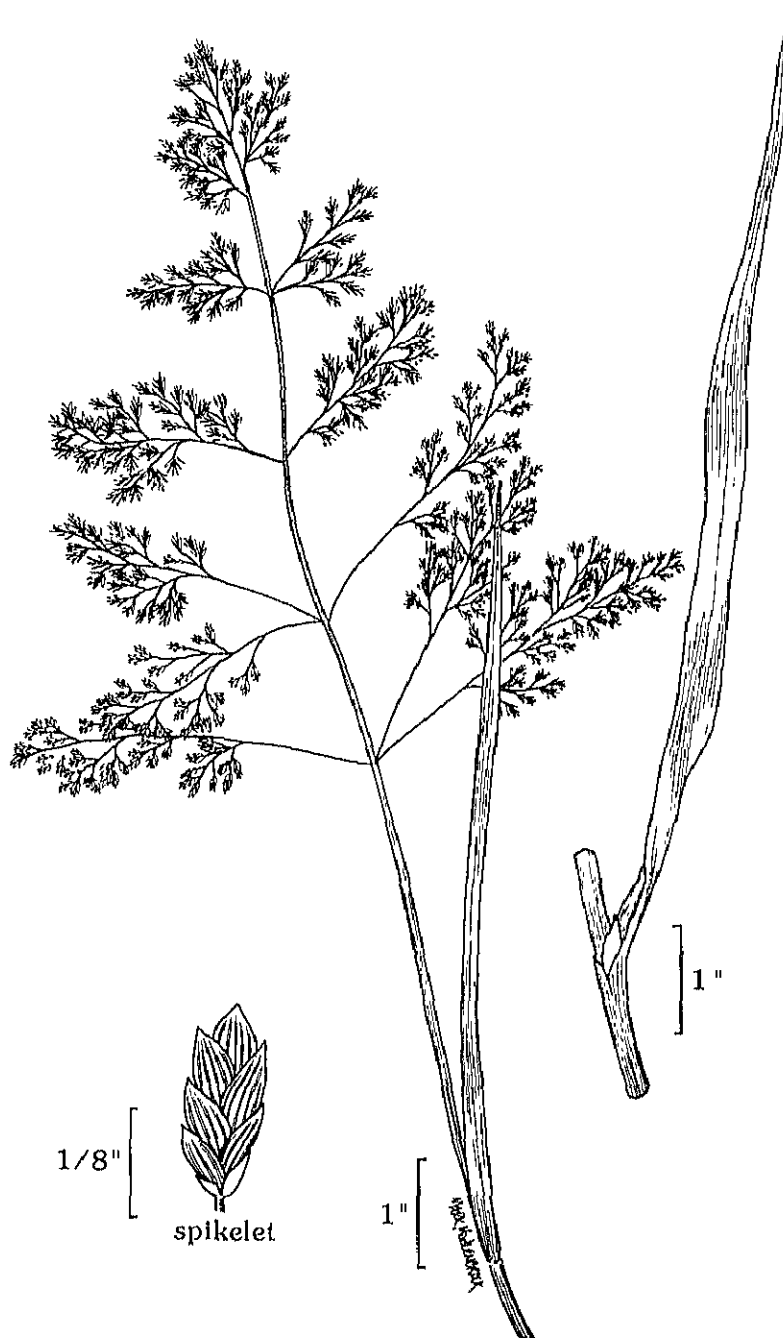
Tall Manna Grass

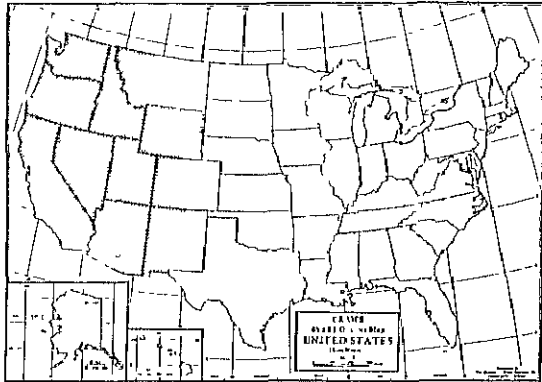
Glyceria elata (Nash ex Rydb.) M.E. Jones

Family: Grass (Gramineae)

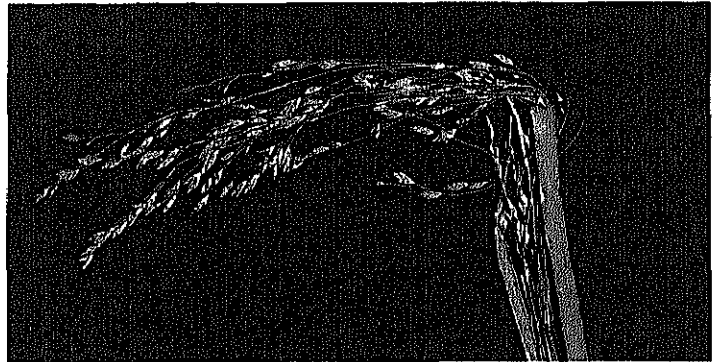
June-August

Field Marks: The spikelets of this manna grass are up to 1/4 inch long and contain 4-8 flowers. The rather succulent stems may be as much as 6 feet tall, and the leaves are 1/6-1/2 inch wide.





Local Notes:



Habitat: Wet meadows, moist woods, in shallow streams, ponds and lakes, ditches, around springs, in the mountains.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, usually unbranched, rather succulent, up to 6 feet tall, smooth.

Leaves: Elongated, 1/6-1/2 inch wide, rough to the touch; ligules up to 1/4 inch long, finely hairy.

Flowers: 4-8 in a spikelet, with many spikelets arranged in an open panicle up to 10 inches long; spikelets up to 1/4 inch long, somewhat flattened; lemmas with 7 nerves.

Sepals: 0.

Petals: 0.

Stamens: 2.

Pistils: Ovary superior, smooth.

Grains: Narrow-ovoid, smooth.

Notes: The seeds are eaten by waterfowl.

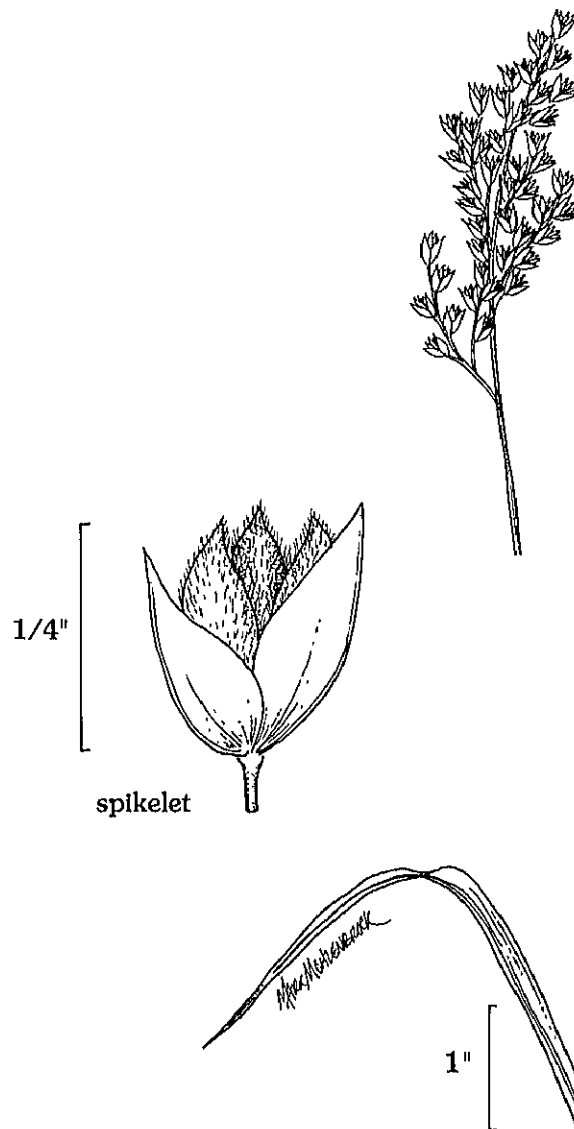
Holy Grass

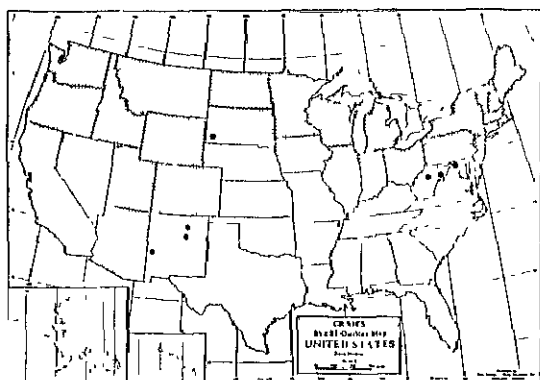
Hierochloa odorata (L.) Beauv.

Family: Grass (Gramineae)

June-August

Field Marks: This grass is easily identified in the field by the vanilla-like fragrance of its stems and leaves, its 3-flowered spikelets about 1/4 inch long, and its hairy lemmas.





Local Notes:



Habitat: Wet meadows, along streams, in bogs.

Habit: Perennial grass with branching rhizomes.

Stems: Upright, hollow, up to 2 feet tall, without hairs.

Leaves: Elongated, narrow, flat, up to 1/4 inch wide, without hairs; ligule up to 1/4 inch long, more or less fringed.

Flowers: Borne in 3-flowered spikelets, the spikelets arranged in a panicle up to 4 inches long; spikelets about 1/4 inch long, the lower 2 flowers male only, the upper flower with both stamens and pistils; lemmas hairy.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Small, ovoid, smooth.

Notes: This species is also known as sweetgrass or vanilla grass because of the fragrance of its stems and leaves. There is a report of this species from California.

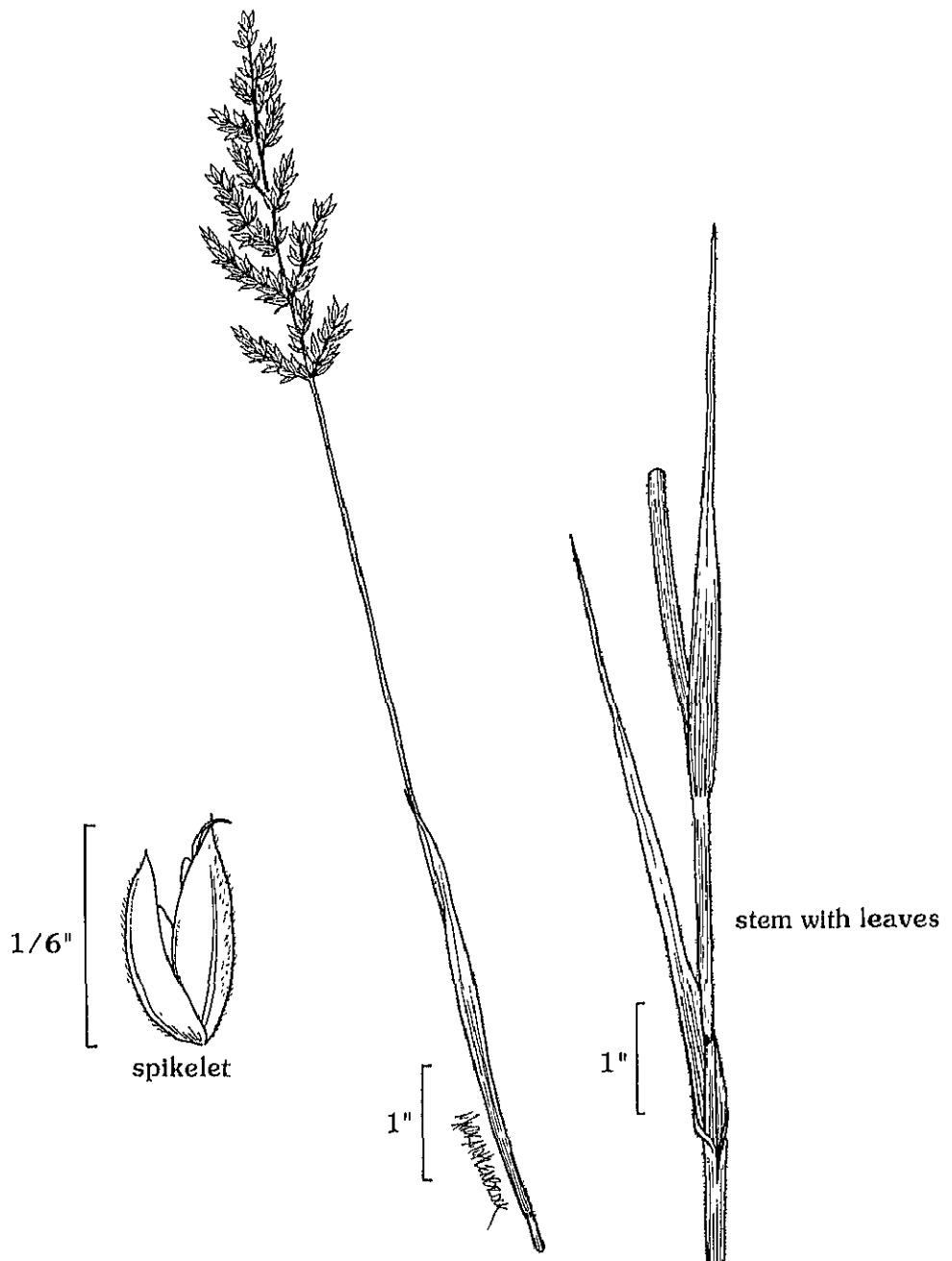
Common Velvet Grass

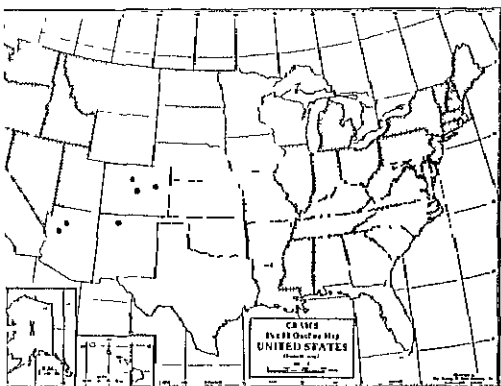
Holcus lanatus L.

Family: Grass (Gramineae)

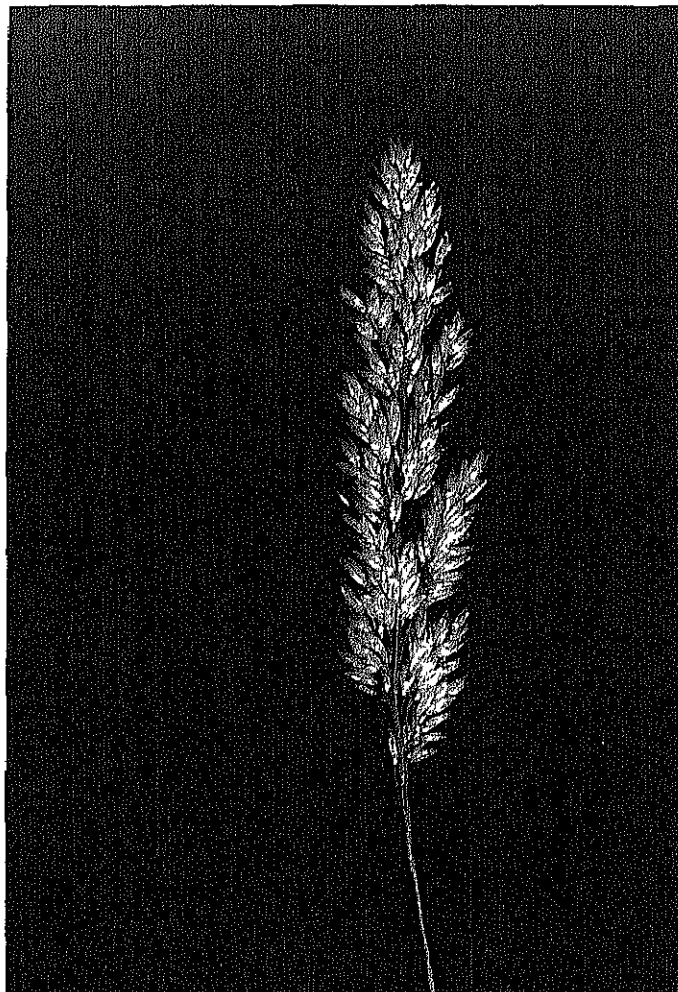
May-September

Field Marks: The leaves and stems of this grass are velvety-hairy. In addition, each spikelet has 2 flowers with hairy glumes and ciliate lemmas. The awn of one of the lemmas is hooked.





cal Notes:



Habitat: Moist meadows, ditches, other disturbed areas.

Habit: Perennial herb with fibrous roots.

Stems: Upright, unbranched, hollow, up to 2 feet tall, velvety-hairy.

Leaves: Elongated, flat, 1/3-1/2 inch wide, velvety-hairy; ligules 1/8-1/6 inch long, finely hairy

Flowers: Borne in spikelets, with many spikelets crowded in rather narrow panicles, sometimes appearing spike-like, up to 6 inches long; spikelets 2-flowered, up to 1/6 inch long; glumes hairy; lemmas ciliate, the upper one with a hooked awn.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ovoid, smooth.

Notes: This grass is a native of Europe. The leaves and stems are grazed by deer and domestic animals.

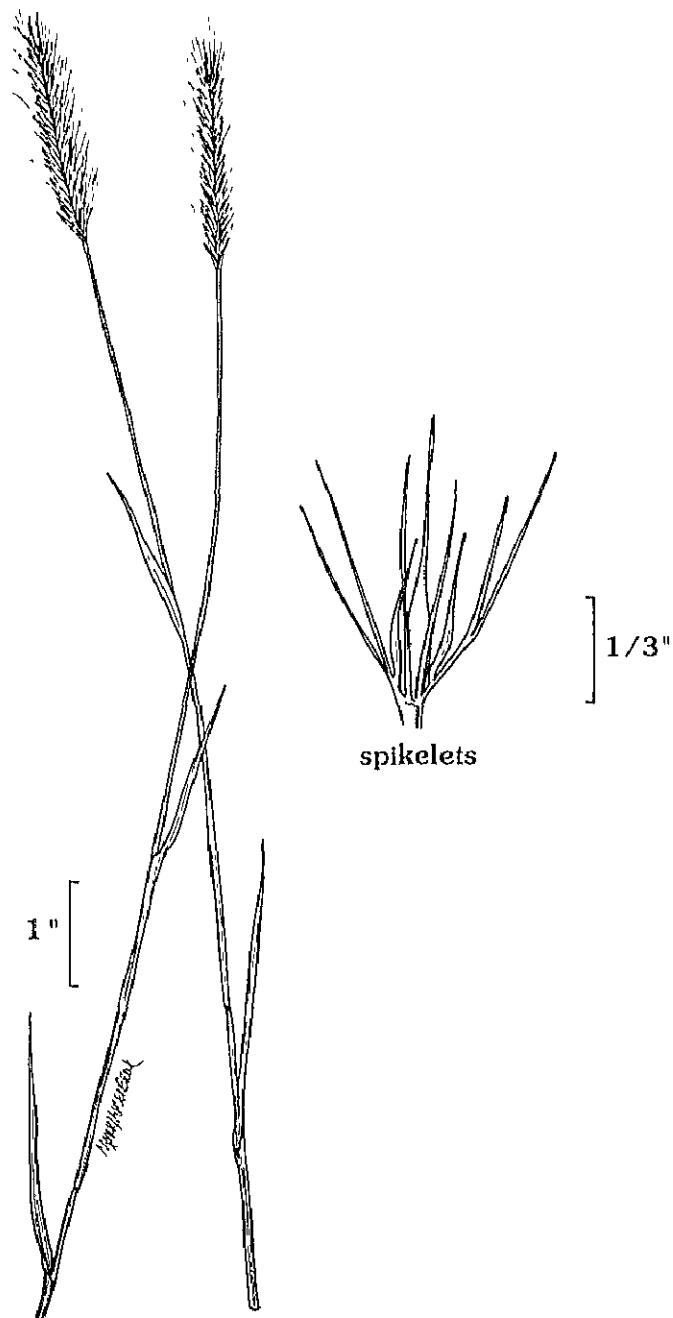
Meadow Barley

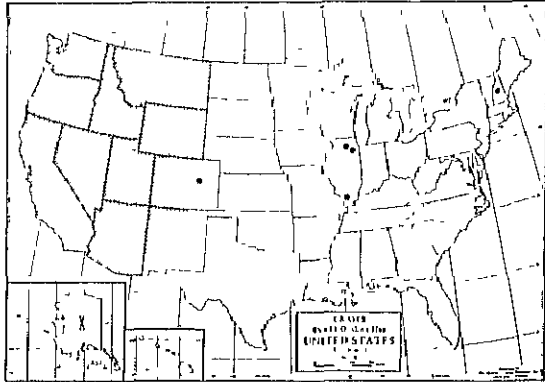
Hordeum brachyantherum Nevskii

Family: Grass (Gramineae)

June-August

Field Marks: This is the only perennial species of *Hordeum* that has awns of the lemmas usually not more than 1/2 inch long





Local Notes:



Habitat: Wet meadows, along streams, in disturbed areas.

Habit: Tufted perennial with fibrous roots.

Stems: Upright or spreading, hollow, up to 2 feet tall, smooth or sparsely hairy.

Leaves: Elongated, flat, up to 1/3 inch wide, usually hairy and rough to the touch.

Flowers: Borne in clusters of 3 spikelets, with many clusters forming a spike up to 3 inches long; glumes awn-like up to 1 inch long; lemmas with an awn not more than 1/2 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Oblongoid, hairy at the tip.

Notes: This is good forage grass for domestic livestock, particularly in the higher ranges.

Bearded Sprangle-top

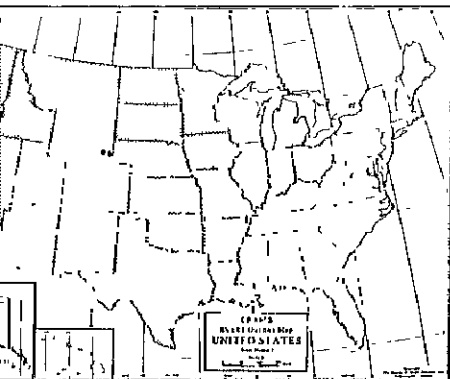
Leptochloa fascicularis (Lam.) Gray

Family: Grass (Gramineae)

July-September

Field Marks: The genus *Leptochloa* has sessile spikelets that are borne in two rows on two sides of the main axis (rachis). The spikelets of the bearded sprangle-top have 5-12 flowers with lemmas 1/6-1/3 inch long.





Notes:



Habitat: Around lakes and ponds, along streams, in marshes, sometimes in shallow standing water. This species may be found in sandy or alkaline habitats.

Habit: Tufted annual grass with fibrous roots.

Stems: Upright, branched, hollow, up to 2 1/2 feet tall, smooth.

Leaves: Elongated, narrow, rolled up into a hollow tube or sometimes flat, up to 1/3 inch wide, smooth or rough to the touch, the uppermost sometimes surpassing the inflorescence.

Flowers: Borne in spikelets, the sessile spikelets arranged in two rows on two sides of the main axis, each spikelet with 5-12 flowers; lemmas 1/6-1/3 inch long, hairy, awned at the tip.

Sepals: 0.

Petals: 0.

Stamens: 3.

Style: Ovary superior.

Grains: Small, ovoid, smooth.

Notes: The grains are eaten by waterfowl.

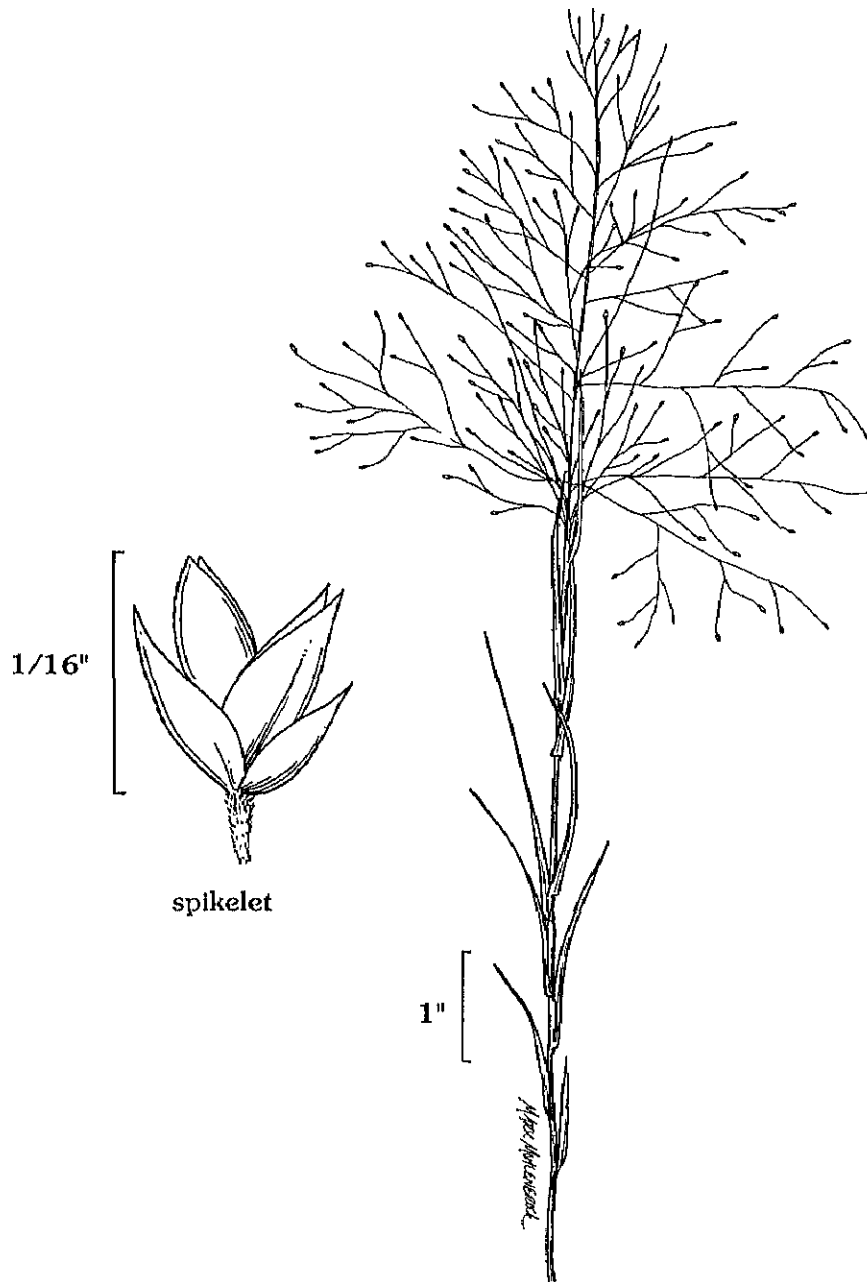
Alkali Muhly

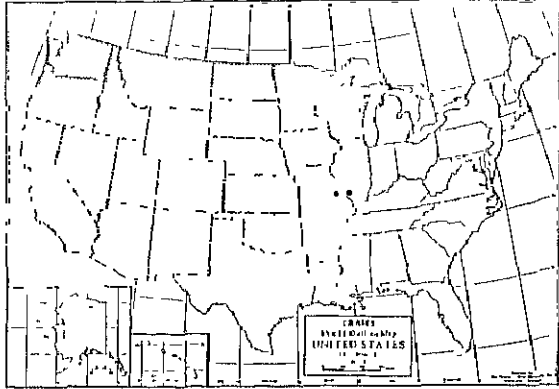
Muhlenbergia asperifolia (Nees & Meyer ex Trin.) Parodi

Family: Grass (Gramineae)

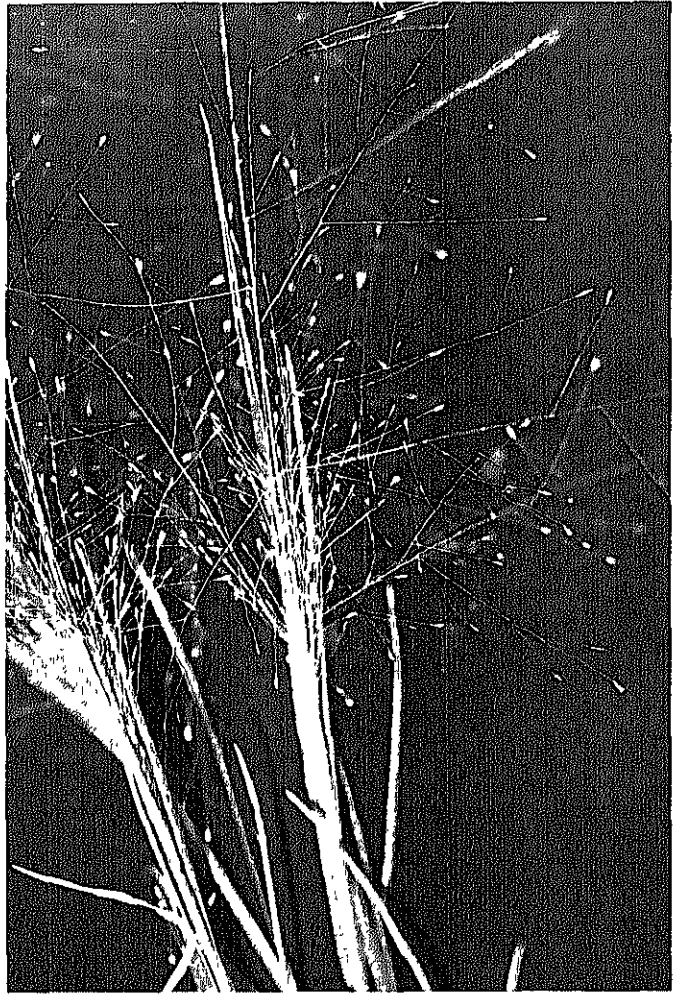
July-September

Field Marks: The genus *Muhlenbergia* is distinguished by its stalked, 1-flowered spikelets with a 3-nerved lemma. This species may be recognized by its open panicles and awnless glumes.





Local Notes:



Habitat: Damp meadows, around ponds, along streams, alkaline flats, disturbed areas.

Habit: Perennial grass with elongated, scaly rhizomes.

Stems: Upright, branched, up to 18 inches tall, smooth, somewhat flattened.

Leaves: Narrow, elongated, flat, up to 1/8 inch wide, usually rough to the touch; sheaths smooth.

Flowers: Borne in 1-flowered spikelets; spikelets several in open panicles at the tips of thread-like branches; panicle up to 10 inches long; spikelets up to 1/12 inch long; glumes awnless.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Smooth, about 1/20 inch long.

Notes: This species, sometimes known as scratchgrass, may invade lawns.

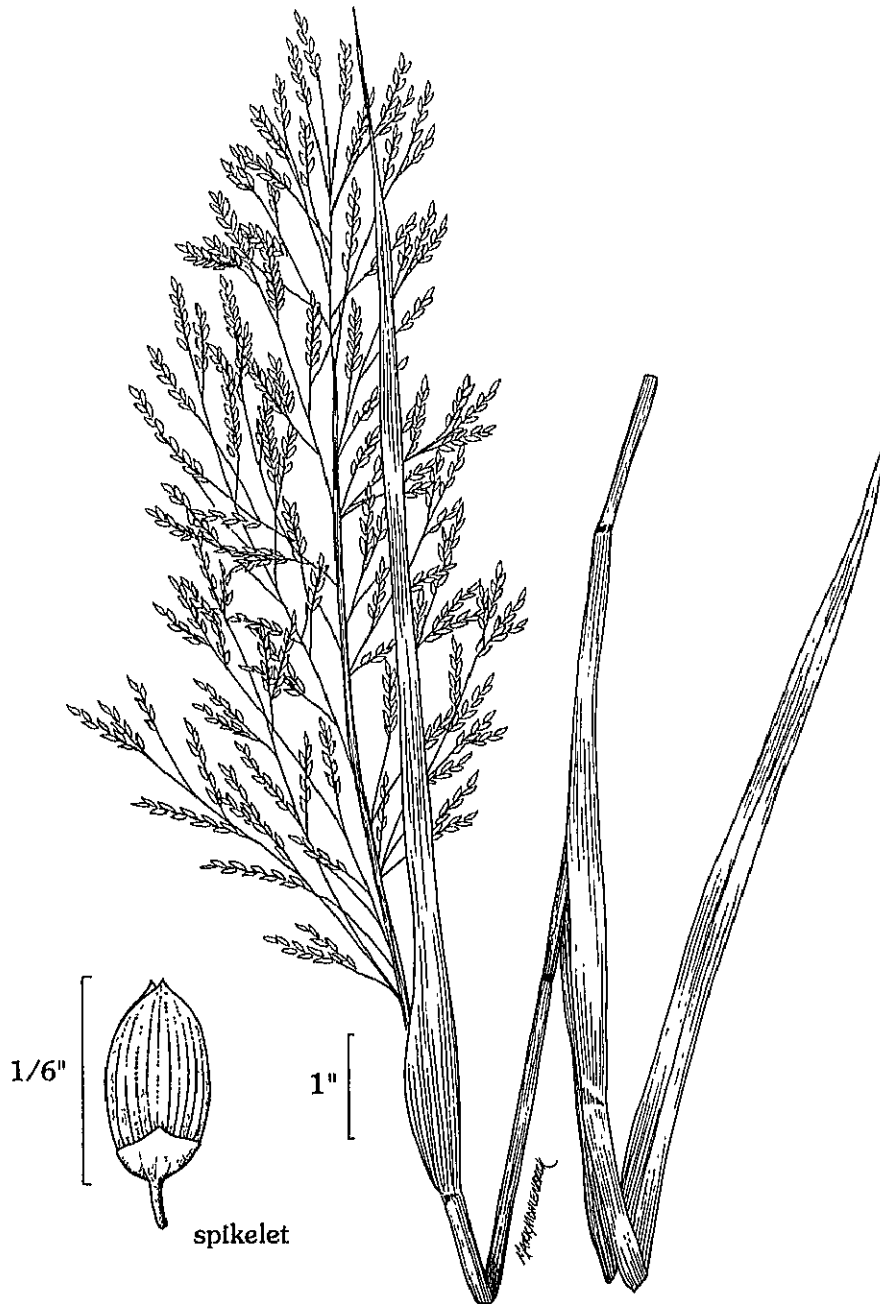
Fall Panic Grass

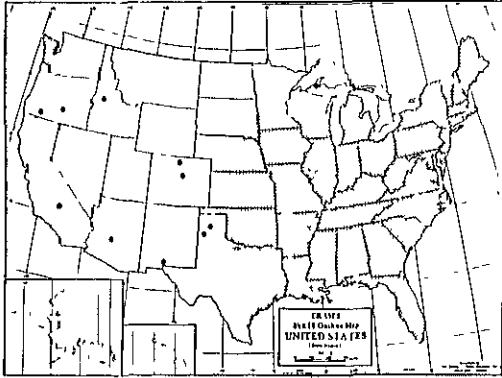
Panicum dichotomiflorum Michx.

Family: Grass (Gramineae)

August-September

Field Marks: This *Panicum* differs from all other panicums in that the first (lowest) glume is only 1/20 inch long and never 1/2 as long as the second glume.





Local Notes:



Habitat: Wet meadows, along streams.

Habit: Tufted annual grass with fibrous roots.

Stems: Upright, usually branched from below, hollow, up to 5 feet tall, without hairs.

Leaves: Elongated, narrow, flat, up to 3/4 inch wide, smooth or slightly rough to the touch.

Flowers: Borne in 1-flowered spikelets, with many spikelets in an open panicle; panicle up to 10 inches long; spikelets 1/6-1/5 inch long, smooth; first (lowest) glume about 1/20 inch long, less than 1/2 as long as second glume; lemma 1/8-1/6 inch long, ellipsoid, shiny.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ovoid, smooth.

Notes: The grains are eaten by birds.

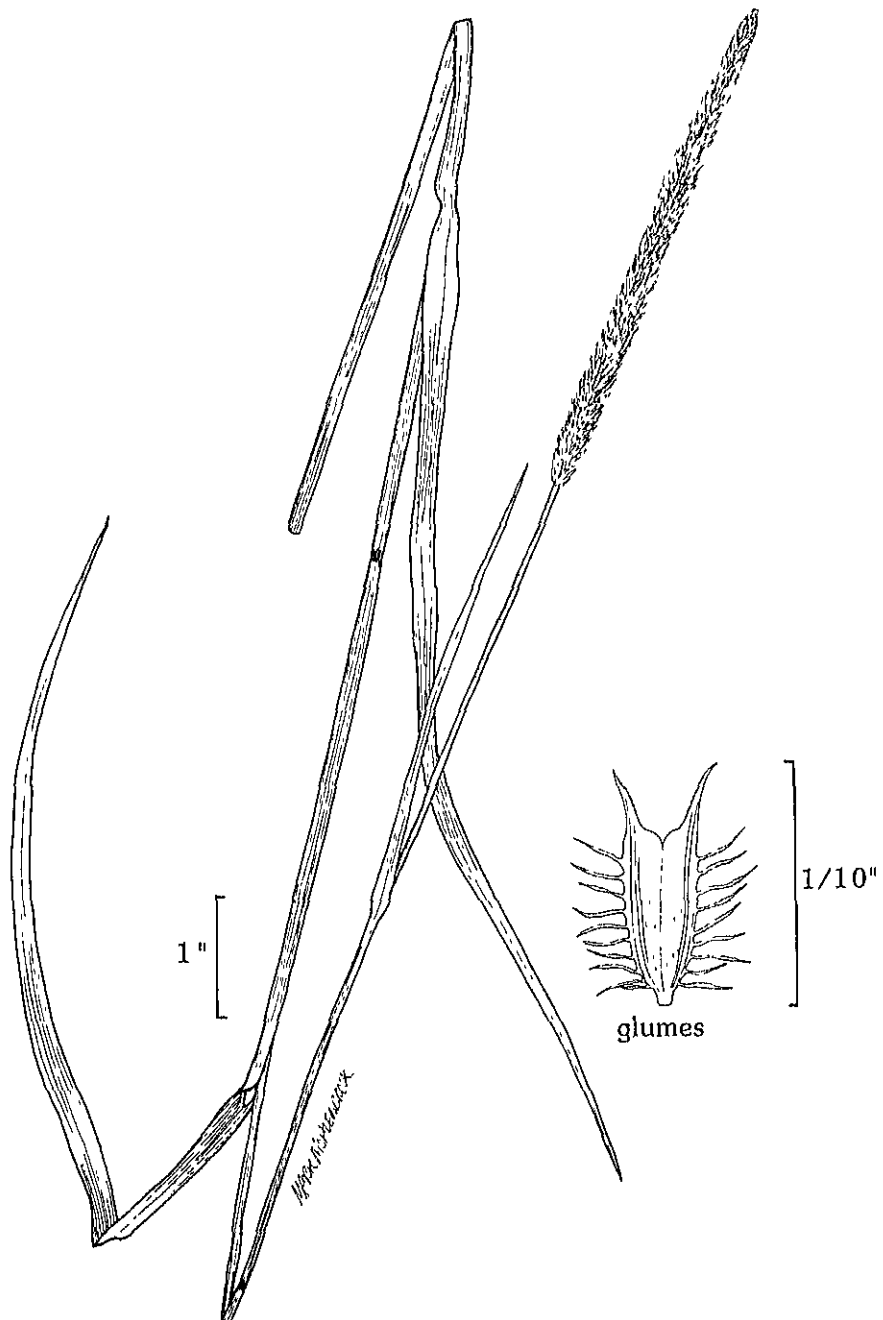
Timothy

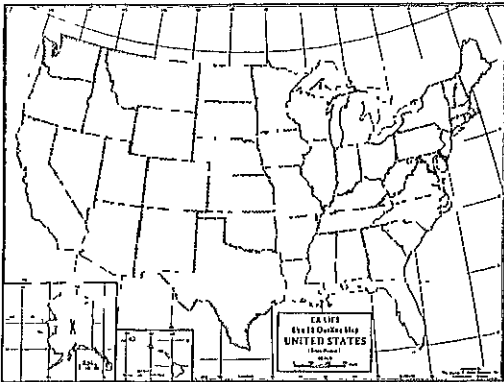
Phleum pratense L.

Family: Grass (Gramineae)

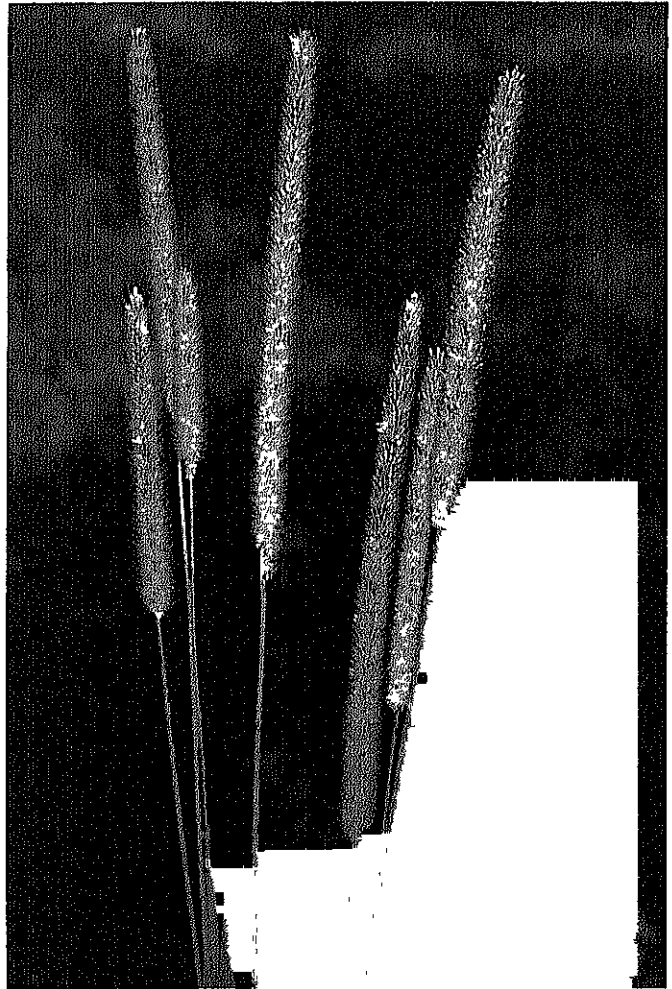
June-September

Field Marks: This grass is readily recognized by its slender, cylindrical spikes, its conspicuous jagged-tipped ligules, and its awned, ciliate glumes.





Local Notes:



Habitat: Along streams, moist woods, meadows, disturbed areas.

Habit: Tufted perennial grass with fibrous roots.

Stems: Upright, unbranched, hollow, somewhat swollen at the base, up to 4 1/2 feet tall, without hairs.

Leaves: Elongated, flat, up to 1/3 inch wide, rough along the edges; ligules up to 1/4 inch long, jagged at the tip.

Flowers: Many 1-flowered spikelets crowded into a continuous cylindrical spike up to 6 inches long and less than 1/2 inch wide; spikelets elliptic, up to 1/8 inch long; glumes awned and with cilia; lemma minutely hairy.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth.

Notes: This is a valuable grass for hay and for foraging by cattle. It is native of Europe, but has been extensively cultivated in the United States.

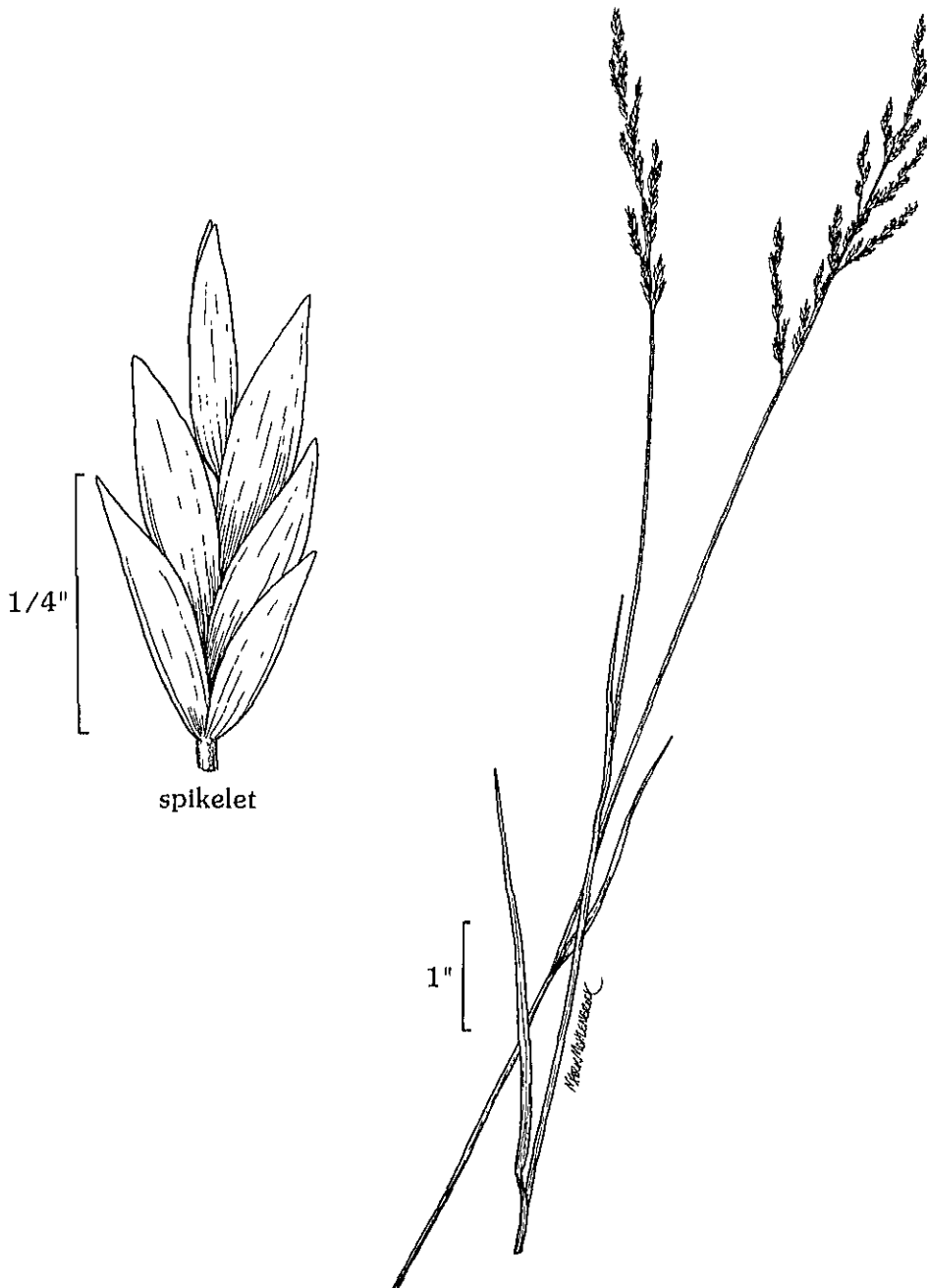
Alkali Bluegrass

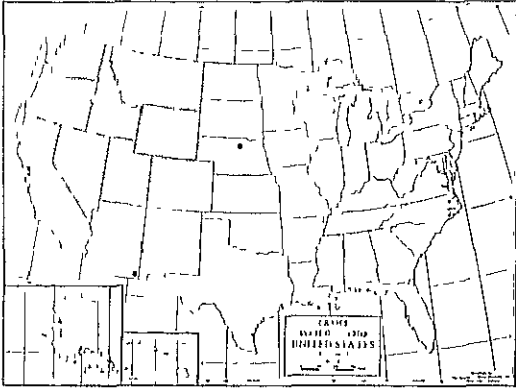
Poa juncifolia Scribn.

Family: Grass (Gramineae)

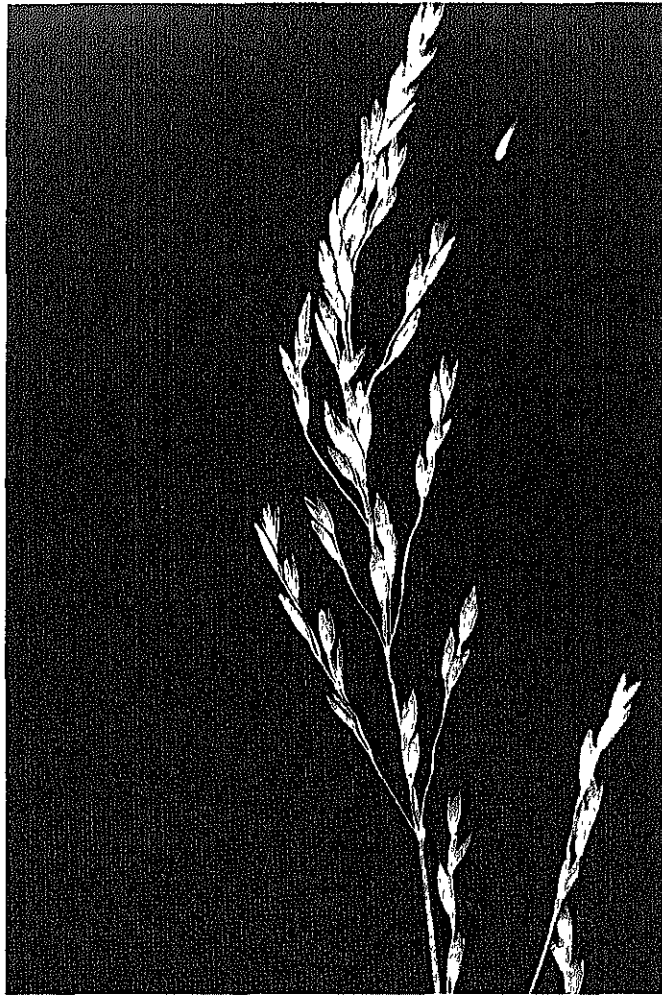
May-July

Field Marks: This species is similar to Nevada bluegrass (*P. nevadensis*) in lacking rhizomes, lacking tufted hairs at the base of the lemmas, and having unkeeled lemmas. It differs by its much shorter ligules and slightly shorter spikelets, and by its alkaline habitat.





Local Notes:



Habitat: Alkaline meadows, from valleys to mountains.

Habit: Tufted perennial grass without rhizomes.

Stems: Upright, unbranched, up to 2 feet tall, without hairs.

Leaves: Elongated, narrow, rolled up into a tube, up to 8 inches long, up to 1/10 inch wide, without hairs; ligules less than 1/8 inch long.

Flowers: Borne in 2- to 5-flowered spikelets, the spikelets 1/4-1/3 inch long, arranged in a narrow panicle up to 6 inches long; lemmas sometimes minutely hairy but not with a tuft of hairs at the base, unkeeled, up to 1/4 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ellipsoid, smooth.

Notes: This species has been reported from New Mexico.

Bog Bluegrass

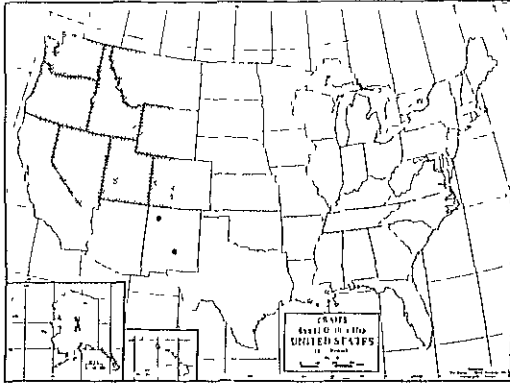
Poa leptocoma Trin.

Family: Grass (Gramineae)

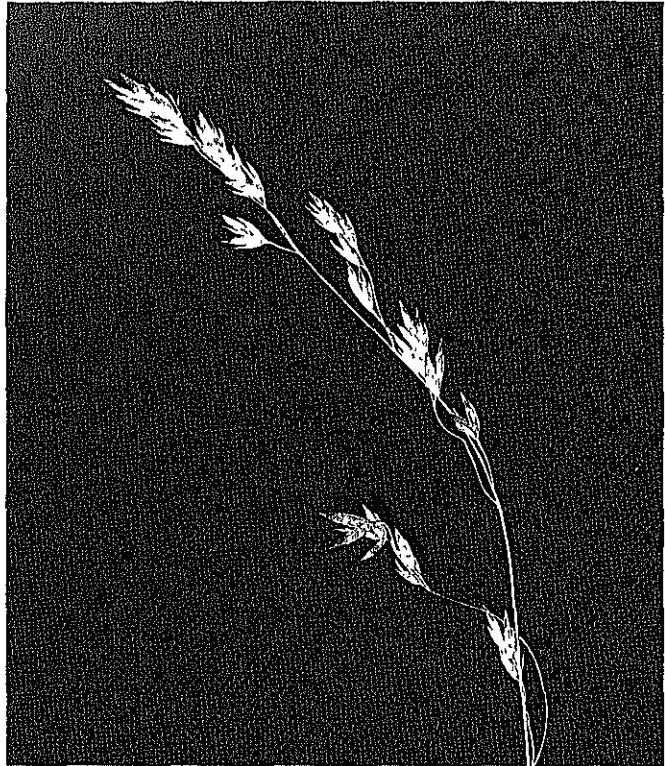
July-August

Field Marks: This bluegrass lacks rhizomes, has lemmas with a web at the base, has relatively small panicles, and has spikelets up to 1/3 inch long





Local Notes:



Habitat: Along streams, wet meadows, bogs, high in the mountains.

Habit: Perennial herb with fibrous roots

Stems: Spreading, often rooting at the nodes, up to 2 feet tall, smooth

Leaves: Elongated, narrow, flat, up to 1/6 inch wide, slightly folded at the tip, rough to the touch.

Flowers: Borne in spikelets, with the spikelets arranged in a small panicle up to 6 inches long; spikelets 2- to 6-flowered, flattened, purplish, up to 1/3 inch long; lemmas hairy, webbed at the base.

Sepals: 0.

Petals: 0.

Stamens: 3

Pistils: Ovary superior, smooth.

Grains: Ellipsoid, smooth

Notes: This grass is palatable to domestic livestock.

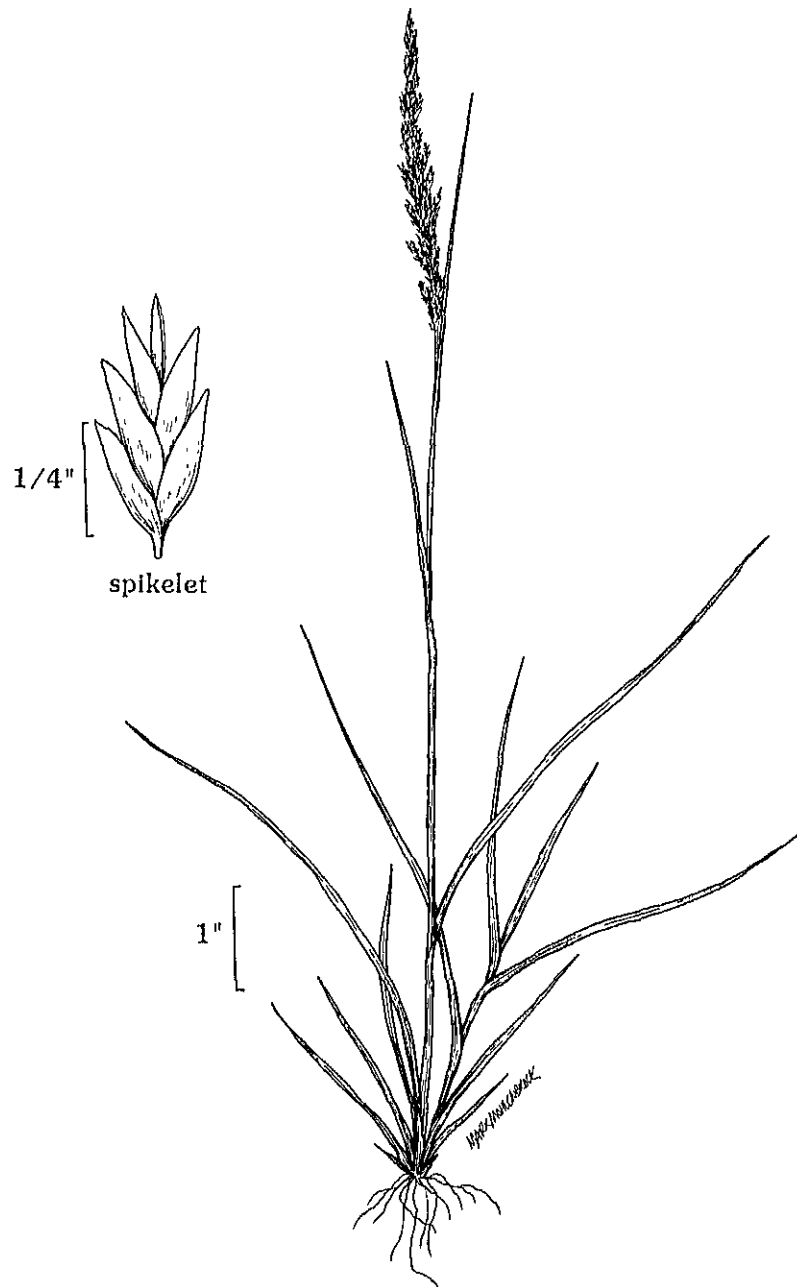
Nevada Bluegrass

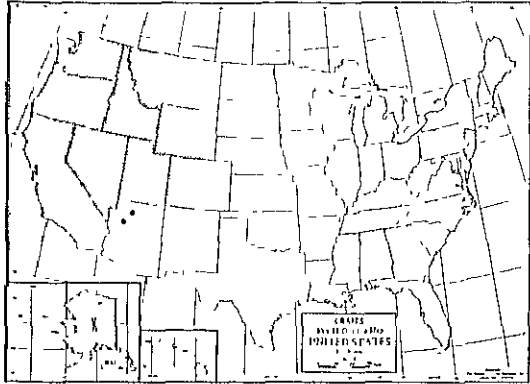
Poa nevadensis Vasey ex Scribn.

Family: Grass (Gramineae)

June-July

Field Marks: This perennial bluegrass is distinguished by its lack of rhizomes, the absence of a tuft of hairs at the base of the lemmas, its unkeeled, hairless lemmas, and its ligules that are 1/10-1/4 inch long.





Local Notes:



Habitat: Meadows and valleys, usually in moist areas.

Habit: Tufted perennial grass without rhizomes.

Stems: Upright, unbranched, several in a cluster, up to 18 inches tall, without hairs.

Leaves: Elongated, narrow, flat to folded to rolled into a tube at the tip, up to 12 inches long, up to 1/8 inch wide, without hairs; ligules 1/10-1/4 inch long.

Flowers: Borne in 2- to 6-flowered spikelets, the spikelets 1/3-1/2 inch long, arranged in a narrow panicle up to 8 inches long; lemmas not hairy, unkeeled, up to 1/4 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ellipsoid, smooth.

Notes: This bluegrass is an important forage species for domestic livestock.

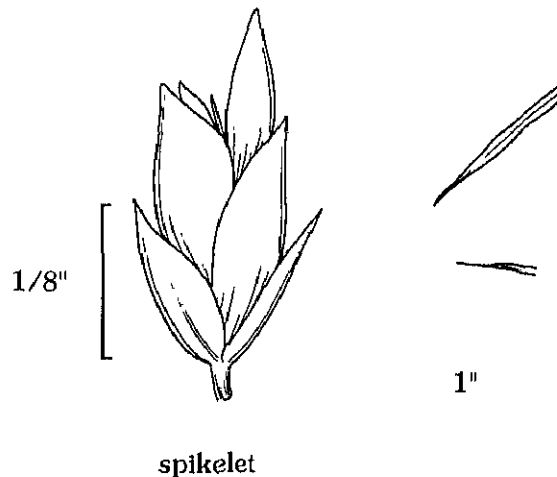
Fowl Bluegrass

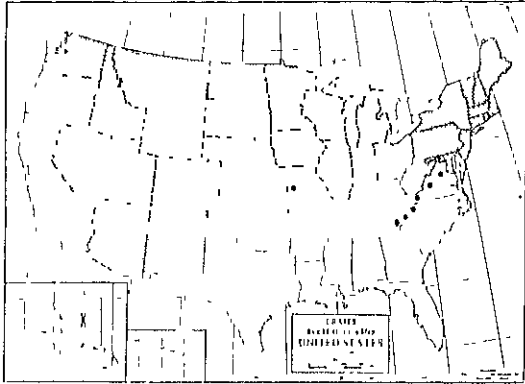
Poa palustris L.

Family: Grass (Gramineae)

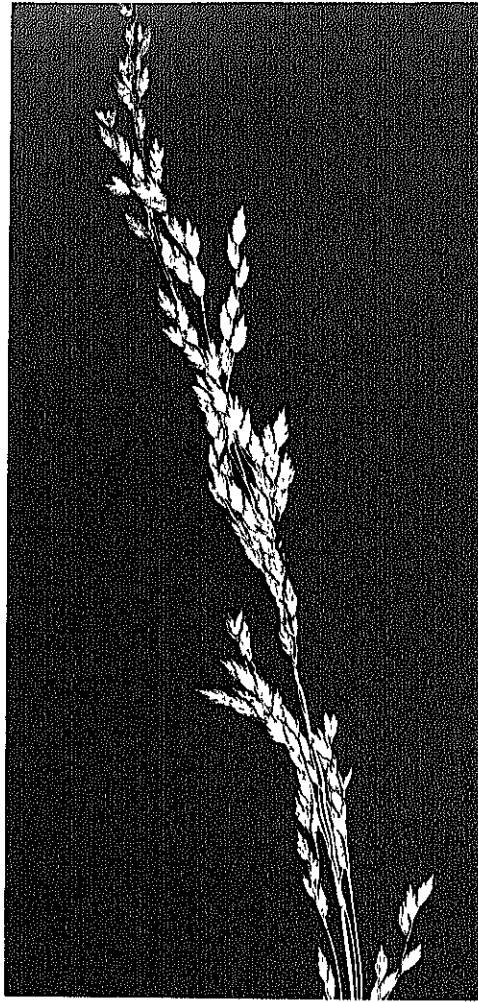
May-August

Field Marks: The distinctive field marks of this bluegrass are the absence of rhizomes, the hairy lemmas, and the panicles more than 4 inches long. The stems are often purplish at the base





Local Notes:



Habitat: Wet meadows, roadside ditches, other moist areas.

Habit: Perennial herb with fibrous roots

Stems: Spreading, often rooting at the nodes, up to 3 feet tall, smooth, often purplish at the base.

Leaves: Alternate, elongated, narrow, flat or folded, up to 8 inches long, boat-shaped at the tip, rough to the touch on the upper surface.

Flowers: Borne in spikelets, with the spikelets arranged in an open panicle up to 1 foot long, spikelets 2- to 4-flowered, up to 1/4 inch long; lemmas hairy, bronze at the tip.

Sepals: 0.

Petals: 0

Stamens: 3

Pistils: Ovary superior, smooth.

Grains: Obovoid, smooth.

Notes: This species has been introduced from Europe and Asia, but is now widely found in the United States

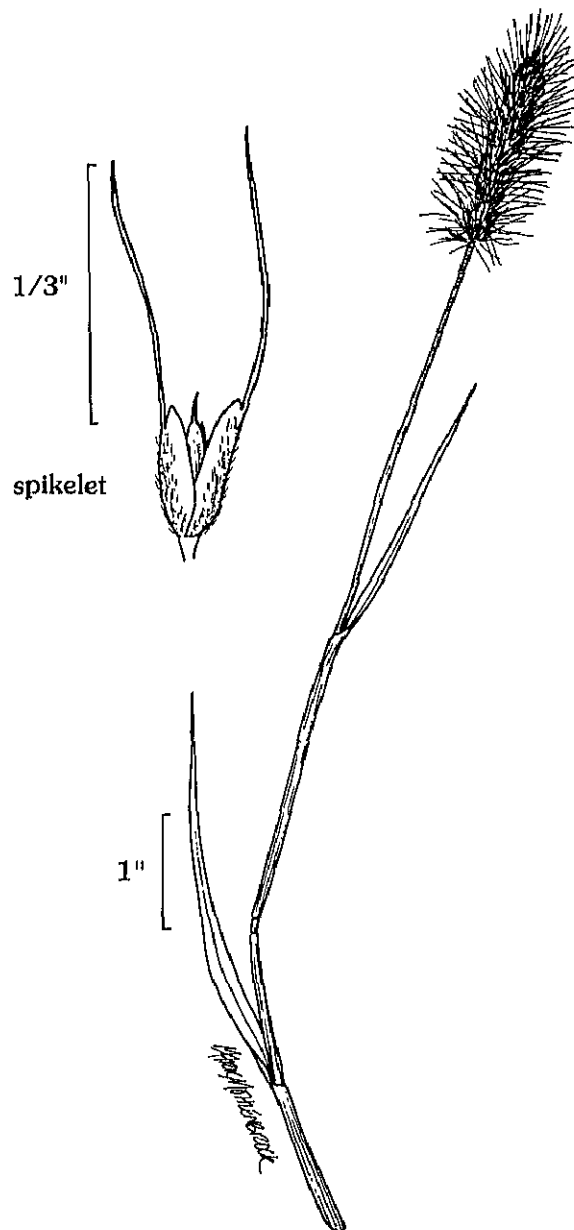
Annual Rabbit-foot Grass

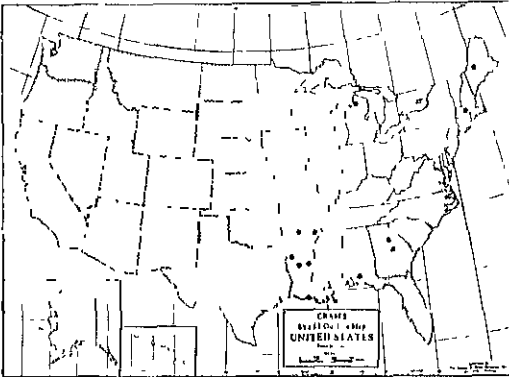
Polypogon monspeltensis (L.) Desf.

Family: Grass (Gramineae)

May-September

Field Marks: This species is distinguished by its soft bristly spike-like panicles and its one-flowered spikelets with both the glumes and lemmas awned.





Local Notes:



Habitat: Wet soil in ditches, marshes, along streams and rivers, around lakes and ponds.

Habit: Annual grass with fibrous roots.

Stems: Solitary or several in clumps, upright, up to 2 feet tall, hollow.

Leaves: Elongated, narrow, up to 8 inches long, up to 1/3 inch wide, rough along the edges, otherwise smooth, conspicuously ridged on the upper surface; ligule up to 1/4 inch long.

Flowers: Borne in spikelets, the spikelets arranged in a dense panicle that resembles a spike.

Spikelets: 1-flowered, the glumes about 1/10 inch long, awned from the notched tip, the awn up to 1/3 inch long, the lemma with an awn about 1/10 inch long.

Stamens: 3.

Pistils: Ovary superior.

Grains: Ovoid, smooth.

Notes: This native of Europe is regularly found in moist, disturbed areas. The grains are eaten by waterfowl.

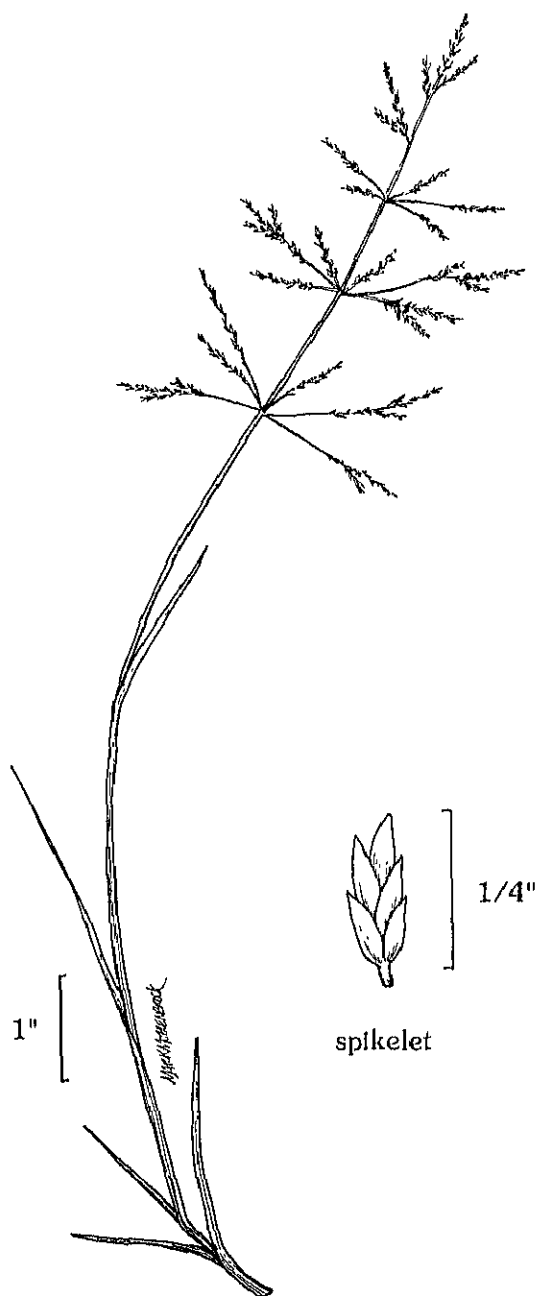
Weeping Alkali Grass

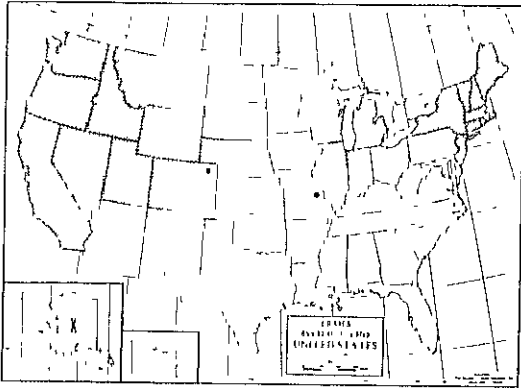
Puccinellia distans (L.) Parlat.

Family: Grass (Gramineae)

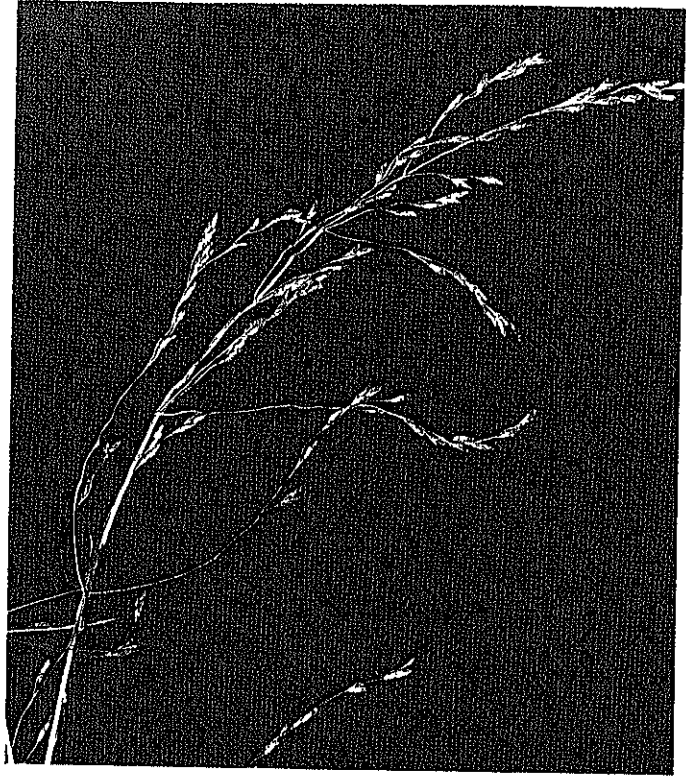
June-August

Field Marks: Of the genera which have several-flowered spikelets, *Puccinellia* usually differs by having lemmas rounded and not keeled on the back and usually 5 obscure, parallel nerves on the lemmas. From other species of *Puccinellia*, *P. distans* usually has the branches of the panicle somewhat pointing downward.





Local Notes:



Habitat: Moist habitats, nearly all in alkaline soils.

Habit: Perennial herb with fibrous roots.

Stems: Spreading at first, becoming upright, unbranched, hollow, up to 4 feet tall, without hairs but sometimes somewhat rough to the touch.

Leaves: Elongated, flat but becoming inrolled, up to 1/6 inch wide, smooth or slightly rough to the touch; ligules very short, rounded at the tip.

Flowers: Borne in spikelets, the spikelets arranged in open panicles, with some of the branches pointing downward, the panicles up to 6 inches long; spikelets 2- to 6-flowered, up to 1/4 inch long.

Sepals: 0

Petals: 0

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Oblongoid, smooth

Notes: This native grass of Europe has become widespread over much of the United States. It is widely used as a forage plant for domesticated animals

Weak Manna Grass

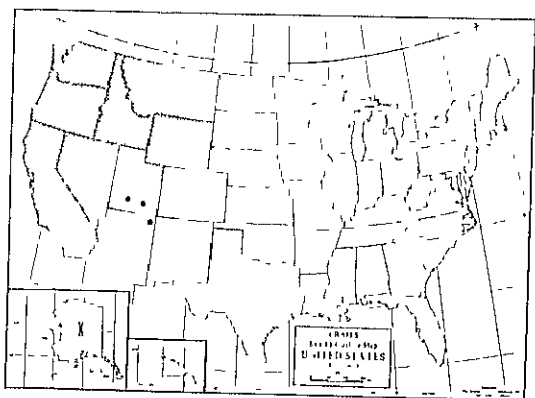
Puccinellia pauciflora (J. Presl) Munz

Family: Grass (Gramineae)

June-August

Field Marks: This *Puccinellia* has rhizomes and is the only species in the genus with conspicuously nerved lemmas. The leaves are very wide, sometimes as much as 3/4 inch wide





Local Notes:



Habitat: Along streams, marshes, often in standing water.

Habit: Perennial herb with stout rhizomes.

Stems: Spreading at first but becoming upright, unbranched, hollow, up to 4 feet tall, smooth, sheaths on stems with cross-markings.

Leaves: Elongated, flat, up to 3/4 inch wide, without hairs but usually slightly rough to the touch.

Flowers: Borne in spikelets, the spikelets arranged in open panicles up to 10 inches long, the branches of the panicle ascending, spreading, or pointing downward.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth.

Grains: Oblongoid, smooth.

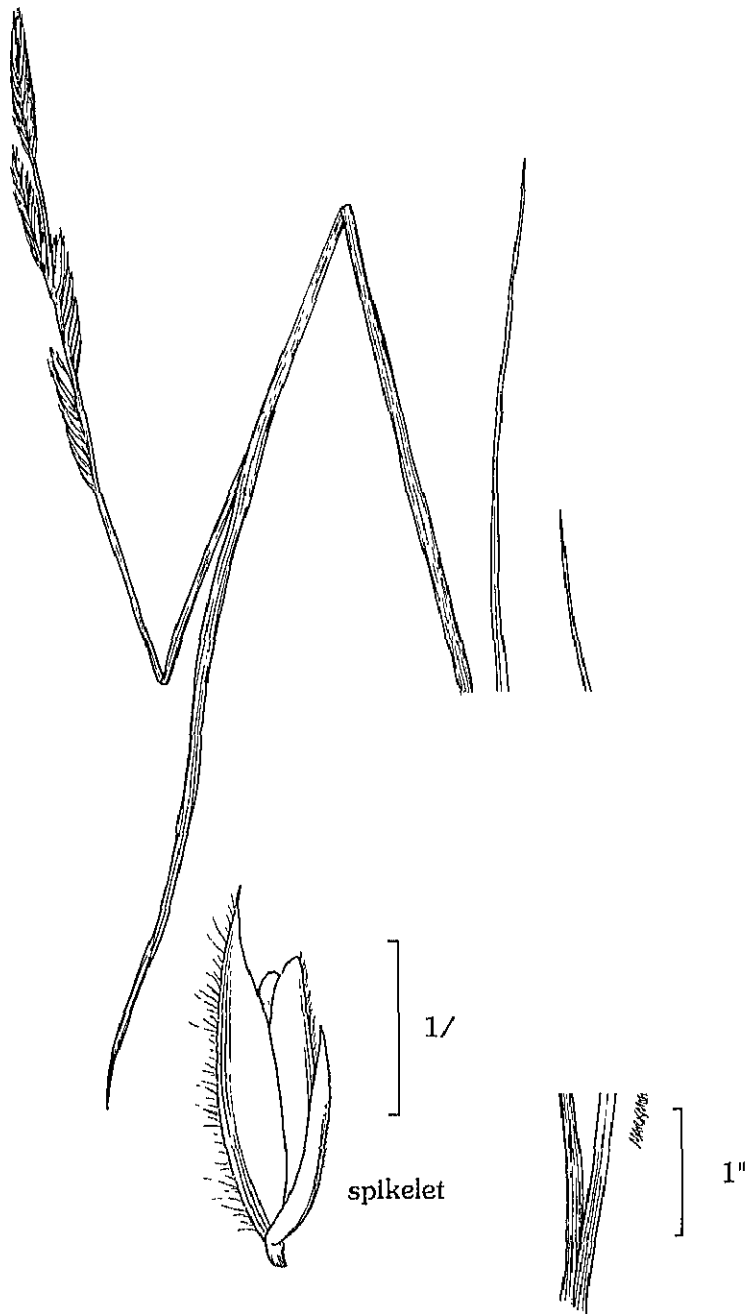
Alkali Cordgrass

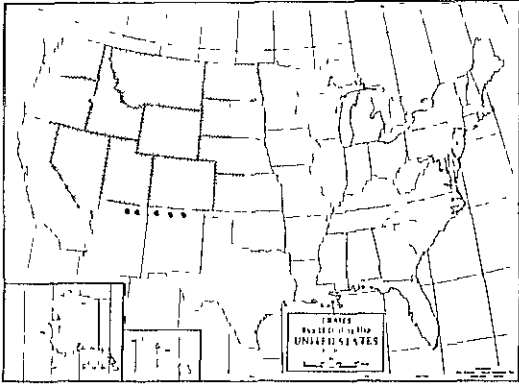
Spartina gracilis Trin.

Family: Grass (Gramineae)

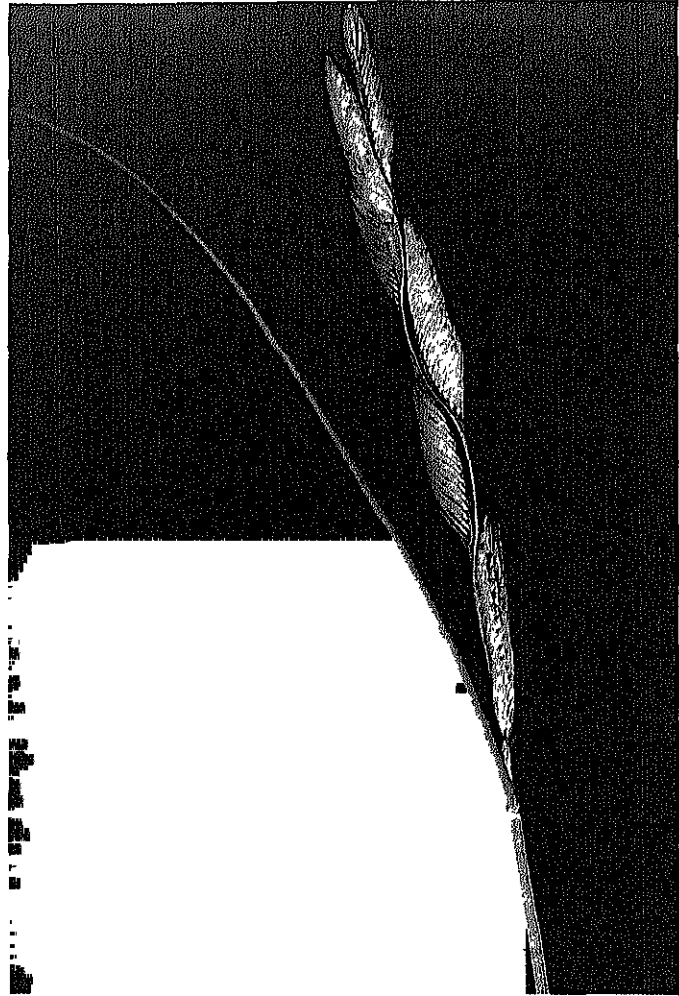
June-September

Field Marks: This species has compressed, 1-flowered spikelets densely arranged in 2 rows on 2 sides of the axis. The second glume is awnless or with a minute awn. The leaves are up to 1/4 inch wide.





Local Notes:



Habitat: Along streams, around lakes and ponds, in wet meadows, frequently in alkaline habitats.

Habit: Perennial herb with well developed rhizomes.

Stems: Upright, unbranched, hollow, up to 3 feet tall, smooth.

Leaves: Elongated, narrow, flat, up to 8 inches long, up to 1/4 inch wide, without hairs but rough to the touch on the upper surface.

Flowers: Borne in 1-flowered spikelets arranged in compressed spikes, with many spikes forming a panicle up to 8 inches long, each spike up to 3 inches long; glumes up to 1/3 inch long, pointed at the tip; lemmas lanceolate, ciliate, not awned.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior.

Grains: Obovoid, smooth.

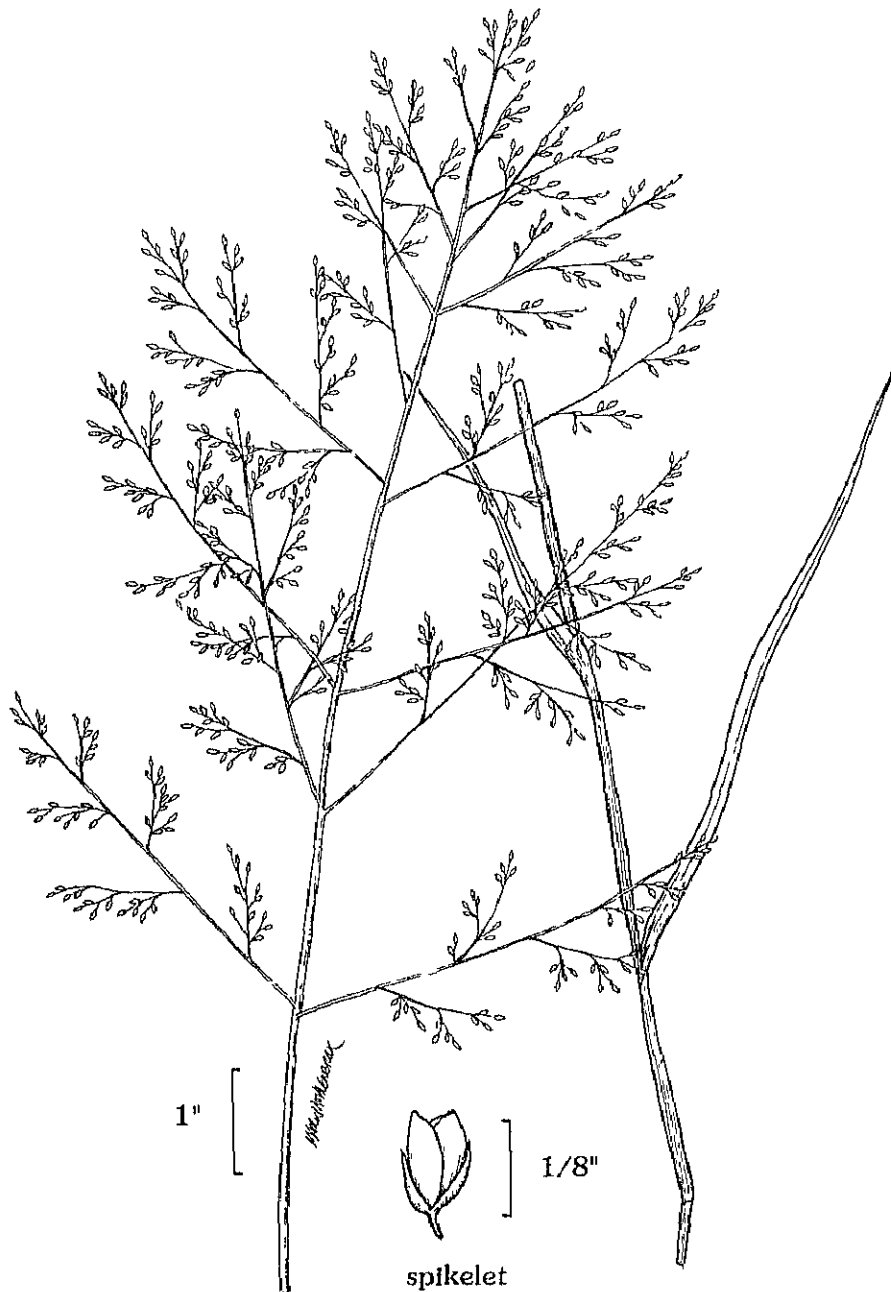
Alkali Sacaton

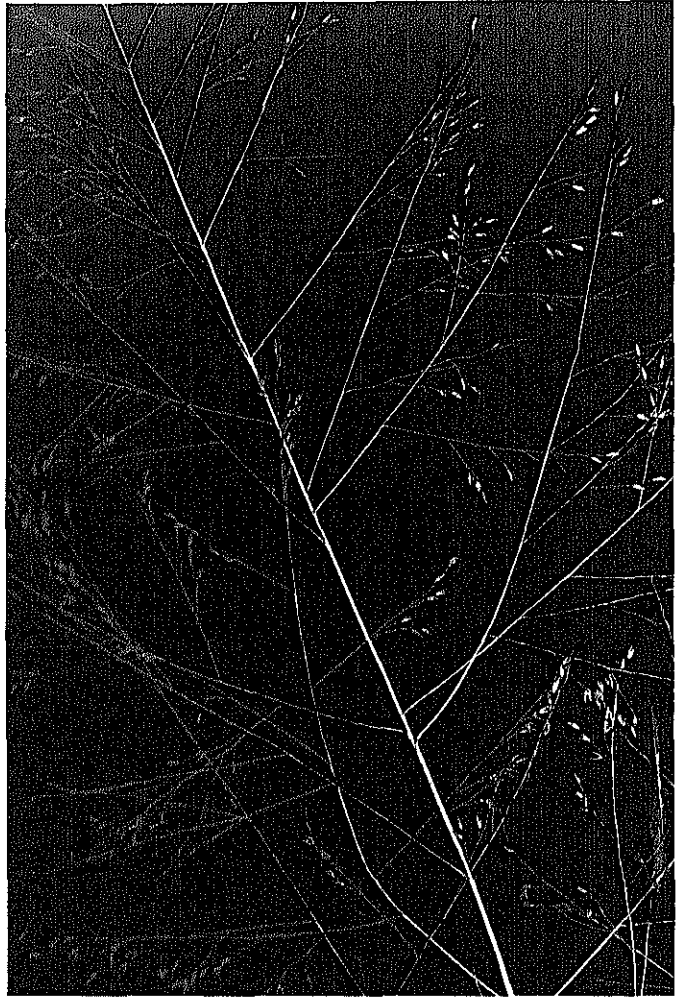
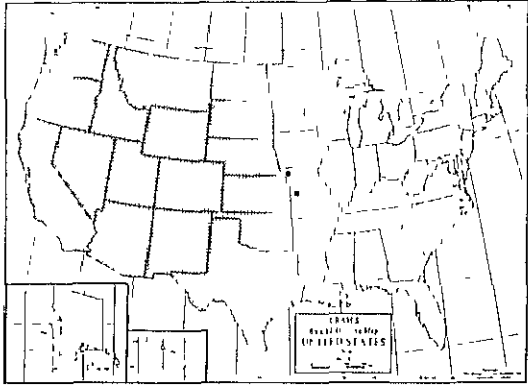
Sporobolus airoides (Torr.) Torr.

Family: Grass (Gramineae)

June-August

Field Marks: This grass forms large clumps topped by broad, open panicles. The spikelets are 1-flowered, and neither the glumes nor the lemmas have awns.





Local Notes:

Habitat: Alkaline meadows

Habit: Stout perennial forming dense tufts.

Stems: Upright, unbranched, up to 4 feet tall, usually hollow, smooth.

Leaves: Alternate, elongated, narrow, crowded at the base of the plant and recurved, flat to inrolled, up to 1/6 inch wide, rough to the touch, hairy near the base; ligule a ring of hairs.

Flowers: Borne in 1-flowered spikelets, with many spikelets forming a broad, open panicle up to 15 inches long; glumes pointed at the tip, smooth, awnless, up to 1/8 inch long, lemmas pointed at the tip, smooth, awnless, up to 1/8 inch long.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth

Grains: Obovoid, smooth.

Notes: This is an important forage grass for domestic livestock.

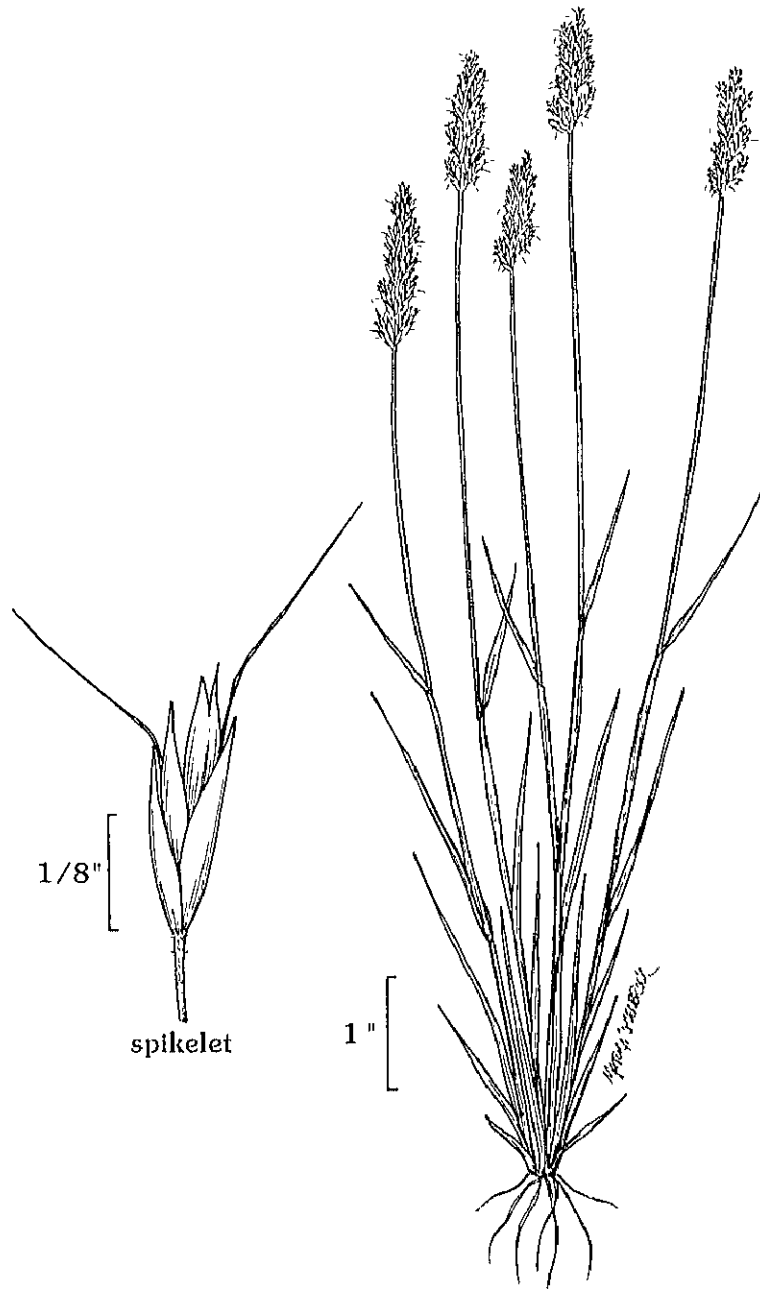
Spiked False-oats

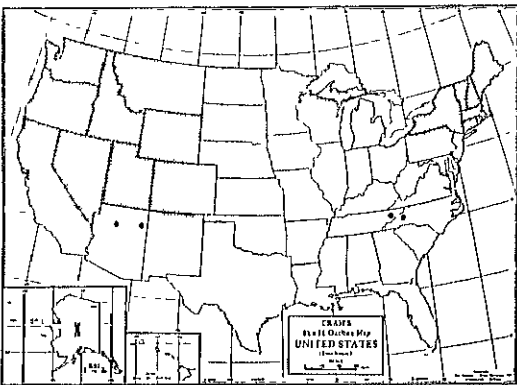
Trisetum spicatum (L.) Richter

Family: Grass (Gramineae)

July-September

Field Marks: This tufted, hairy grass has spike-like panicles 1-6 inches long. The usually 2-flowered spikelets have lemmas with an awn that arises just below the tip of the lemma.





Local Notes:



- Habitat:** Wet meadows, particularly in the high mountains.
- Habit:** Tufted perennial grass with fibrous roots.
- Stems:** Upright, unbranched, hollow, up to 2 feet tall, smooth or hairy.
- Leaves:** Elongated, flat or folded, up to 1/4 inch wide, usually hairy; ligules up to 1/6 inch long, ciliate, jagged at the tip.
- Flowers:** Borne in spikelets, the spikelets crowded into spike-like panicles 1-6 inches long; spikelets usually 2-flowered (sometimes 3), 1/6-1/4 inch long, purplish to silvery; lemmas notched at the tip, with an awn arising just below the notch, the awn 1/4-1/3 inch long.
- Sepals:** 0.
- Petals:** 0.
- Stamens:** 3.
- Pistils:** Ovary superior, smooth.
- Grains:** Ellipsoid, smooth.
- Notes:** This grass is an important forage species for domestic cattle in the high mountains.

GROUP 3

Sedges

GROUP 3

Sedges

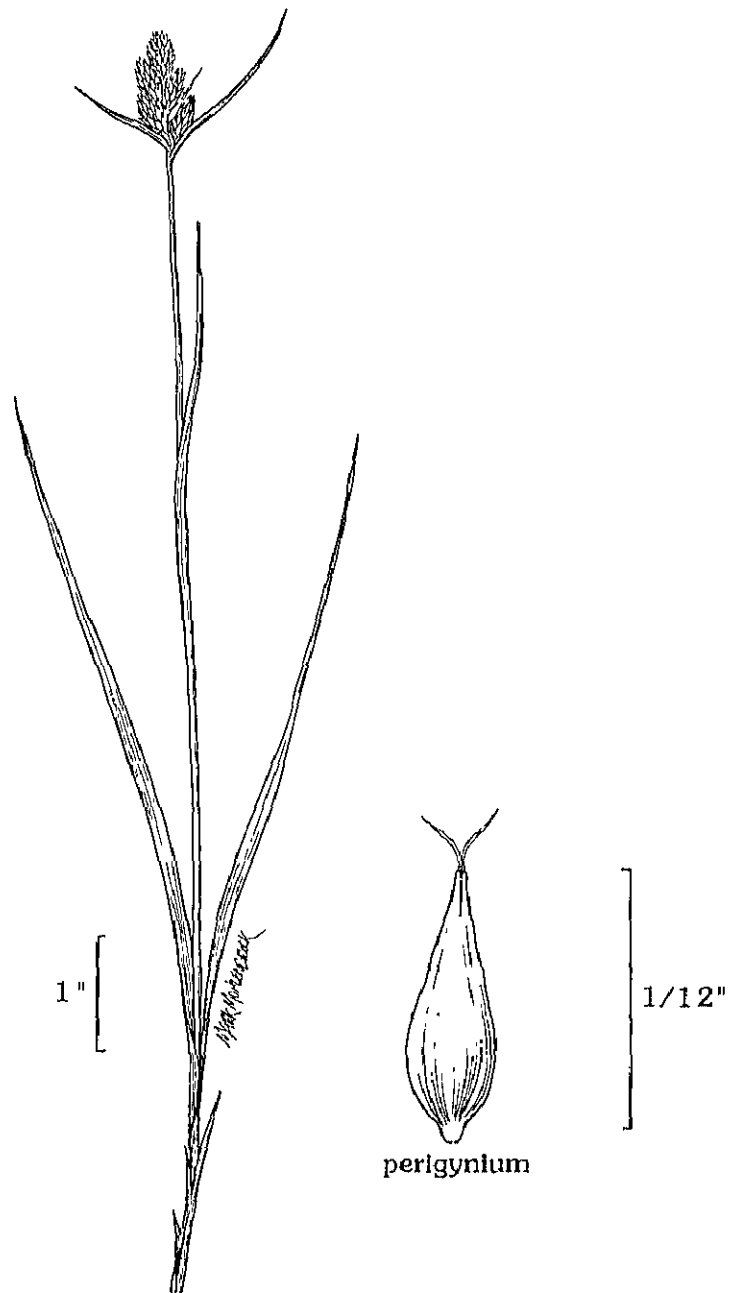
Slender-beak Sedge

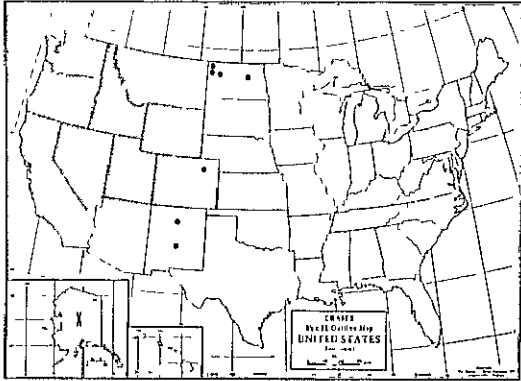
Carex athrostachya Olney

Family: Sedge (Cyperaceae)

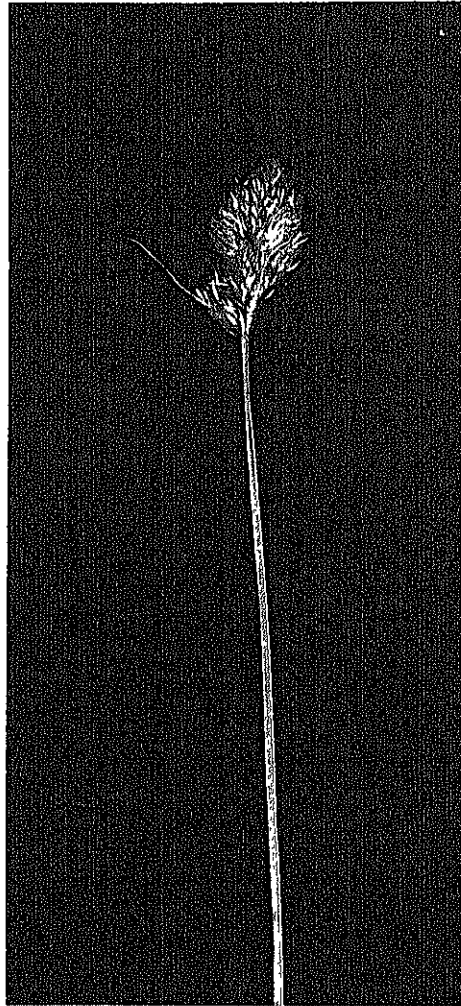
May-July

Field Marks: The field marks of this sedge are the crowded spikes, all of which are female at the top and male at the bottom, wing-margined, slender, narrowly beaked perigynia, and the presence of a long leaf-like bract at the base of the inflorescence.





Local Notes:



Habitat: Marshes, meadows, woodlands.

Habit: Densely tufted perennial with fibrous roots.

Stems: Upright, unbranched, up to 2 feet tall, smooth.

Leaves: Elongated, often all near the base of the plant, flat, up to 1/6 inch wide, without hairs.

Flowers: Male and female borne in the same spikes, with the female flowers above the male ones, with several spikes crowded in the inflorescence, each spike 1/4-1/2 inch long, the inflorescence subtended by a leaf-like bract much longer than the inflorescence; scales narrower and usually slightly shorter than the perigynia, brownish, tapering to a point.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, the perigynium flattened, pale green to tan, lanceolate, with a narrow, minutely toothed wing on either side, without or with only a few nerves, up to 1/4 inch long, up to 1/12 inch wide; stigmas 2.

Fruits: Achenes lenticular, up to 1/12 inch long.

Notes: The achenes are eaten by birds. This is a good forage species for cattle and horses.

Golden-fruit Sedge

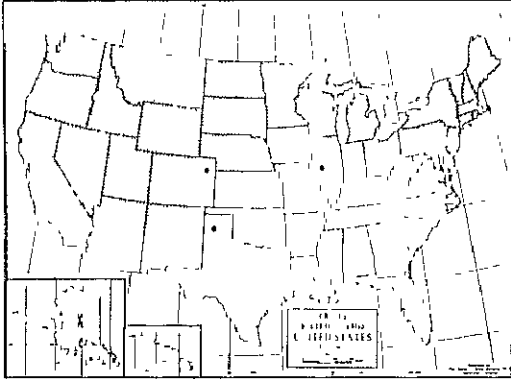
Carex aurea Nutt.

Family: Sedge (Cyperaceae)

May-July

Field Marks: The following combination of characters distinguishes this sedge: stigmas 2, achenes lenticular, male spike usually separate from the female, scales tinged reddish brown, and height of plant not more than 15 inches





Local Notes:



Habitat: Wet meadows, marshes, moist woods.

Habit: Perennial herb with whitish, creeping rhizomes.

Stems: Upright, unbranched, slender, up to 15 inches tall, smooth.

Leaves: Elongated, flat, up to 1/6 inch wide, smooth, sometimes longer than the stem.

Flowers: Male and female borne in separate spikes; male spike solitary, terminal, 1/4-3/4 inch long; female spikes 2-5, 1/4-3/4 inch long, the lowest one usually subtended by a leaf-like bract longer than the inflorescence; scales half as long as to as long as the perigynia, rounded or with a short point at the tip, brown to straw-colored, usually with a green center and a transparent border.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, the perigynium ellipsoid to nearly spherical, rounded and without a beak at the tip, up to 1/8 inch long, with or without nerves, golden or yellow-brown when mature, stigmas 2.

Fruits: Achenes lenticular, up to 1/10 inch long.

Notes: The achenes are eaten by waterfowl.

Showy Sedge

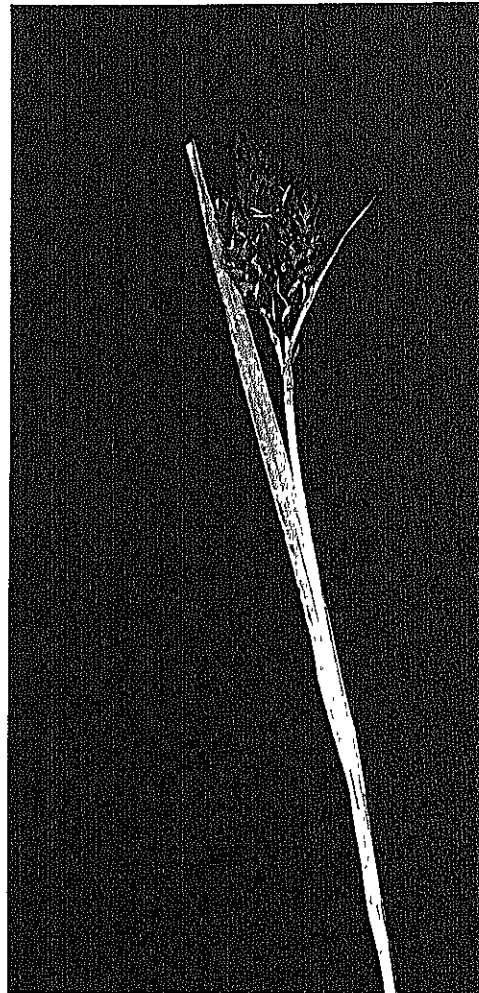
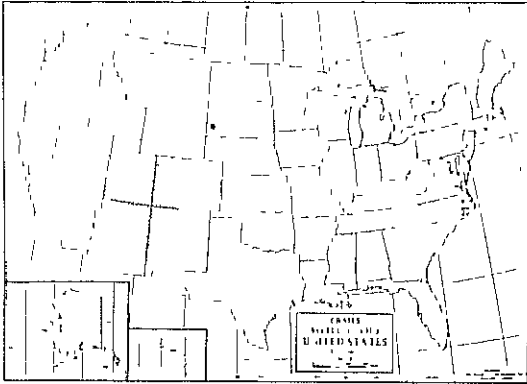
Carex bella L H. Bailey

Family: Sedge (Cyperaceae)

May-August

Field Marks: This *Carex* has the following distinctive features achenes triangular, stigmas 3, perigynium scarcely beaked, spikes with female flowers at the top, male spikes at the bottom, and none of the spikes overlapping





Local Notes:

Habitat: Wet meadows, along streams, moist woods, usually in the higher mountains.

Habit: Perennial herb with fibrous roots but without rhizomes

Stems: Upright, up to 2 feet tall, smooth

Leaves: Elongated, flat, up to 1/3 inch wide, smooth.

Flowers: Crowded into spikelets, the spikelets up to 1 1/2 inches long, subtended by a bract without a sheath at its base; male flowers borne at the base of each spikelet; lower spikelets tending to droop

Scales: Ovate, pointed at the tip, reddish brown to blackish brown with a transparent edge and a green mid-vein, up to 1/8 inch long

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium obovoid, up to 1/4 inch long, with a very short, terminal beak, stigmas 3.

Fruits: Achenes triangular, up to nearly 1/4 inch long, smooth.

Notes: The achenes are eaten by birds and small mammals.

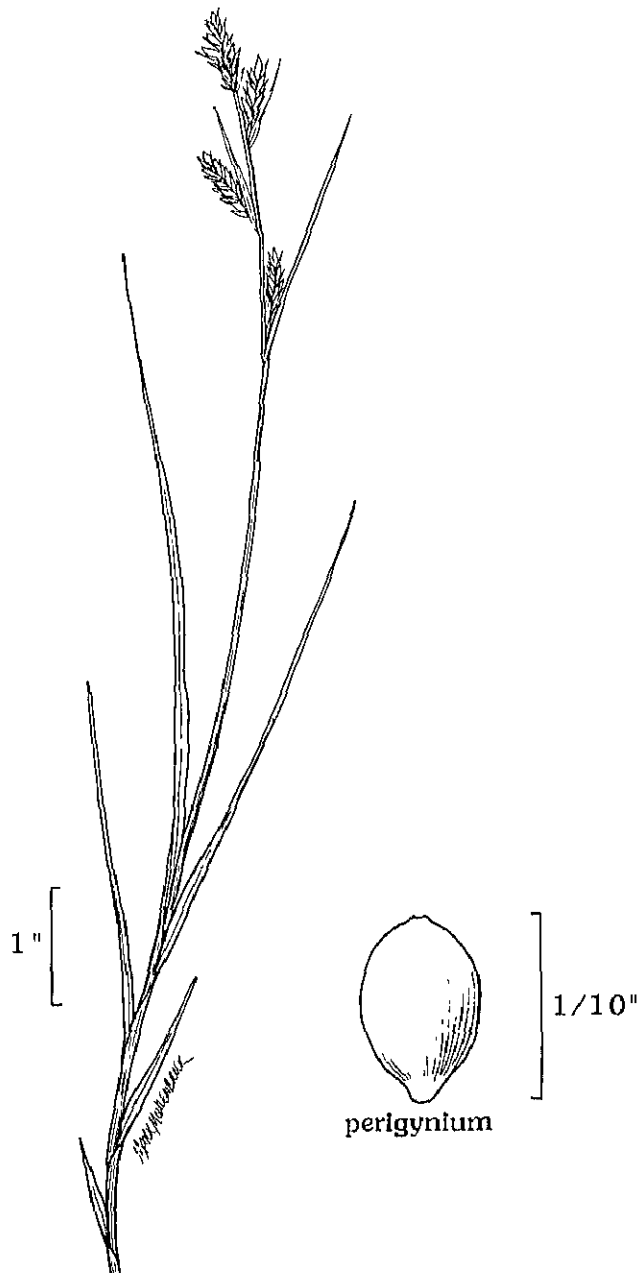
Brown Bog Sedge

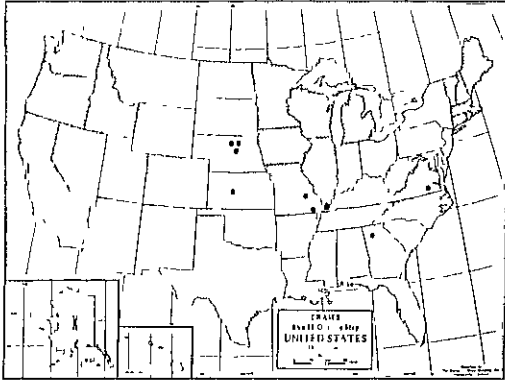
Carex buxbaumii Wahlenb.

Family: Sedge (Cyperaceae)

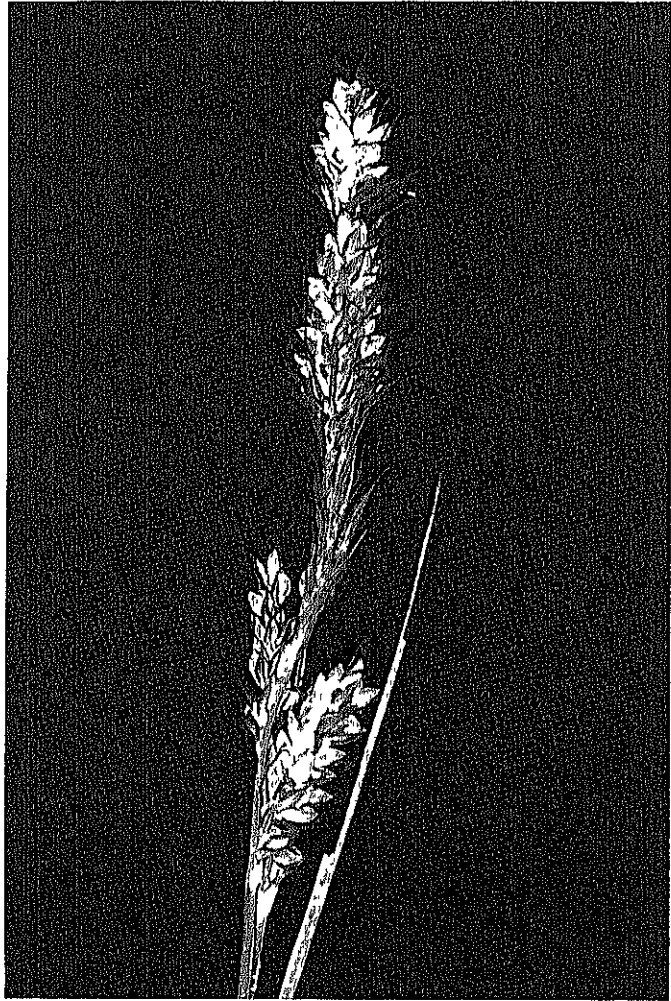
May-August

Field Marks: The perigynia are covered with minute warts when viewed with a lens. The terminal spike has female flowers at the top and male flowers below. The other spikes have only female flowers. There are 3 stigmas, and the achenes are triangular.





Local Notes:



Habitat: Swamps, bogs, around lakes, wet meadows.

Habit: Perennial herb with creeping rhizomes, without last year's leaves persisting at the base of the plant.

Stems: Upright, unbranched, up to 3 feet tall, without hairs.

Leaves: Elongated, up to 1/6 inch wide, without hairs, usually all shorter than the stems.

Flowers: Borne in 2-5 spikes, the terminal spike up to 1 1/2 inches long, with female flowers at the top and male flowers below, the other spikes up to 1 1/2 inches long, with only female flowers; scales longer than the perigynia, brown to purple-black, with a paler midvein, tapering to a slender awn at the tip.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, the perigynium ellipsoid to obovoid, up to 1/5 inch long, covered with minute warts, beakless or with a very short beak, pale gray-green; stigmas 3.

Fruits: Achenes triangular, up to 1/10 inch long, smooth.

Notes: The achenes are eaten by waterfowl.

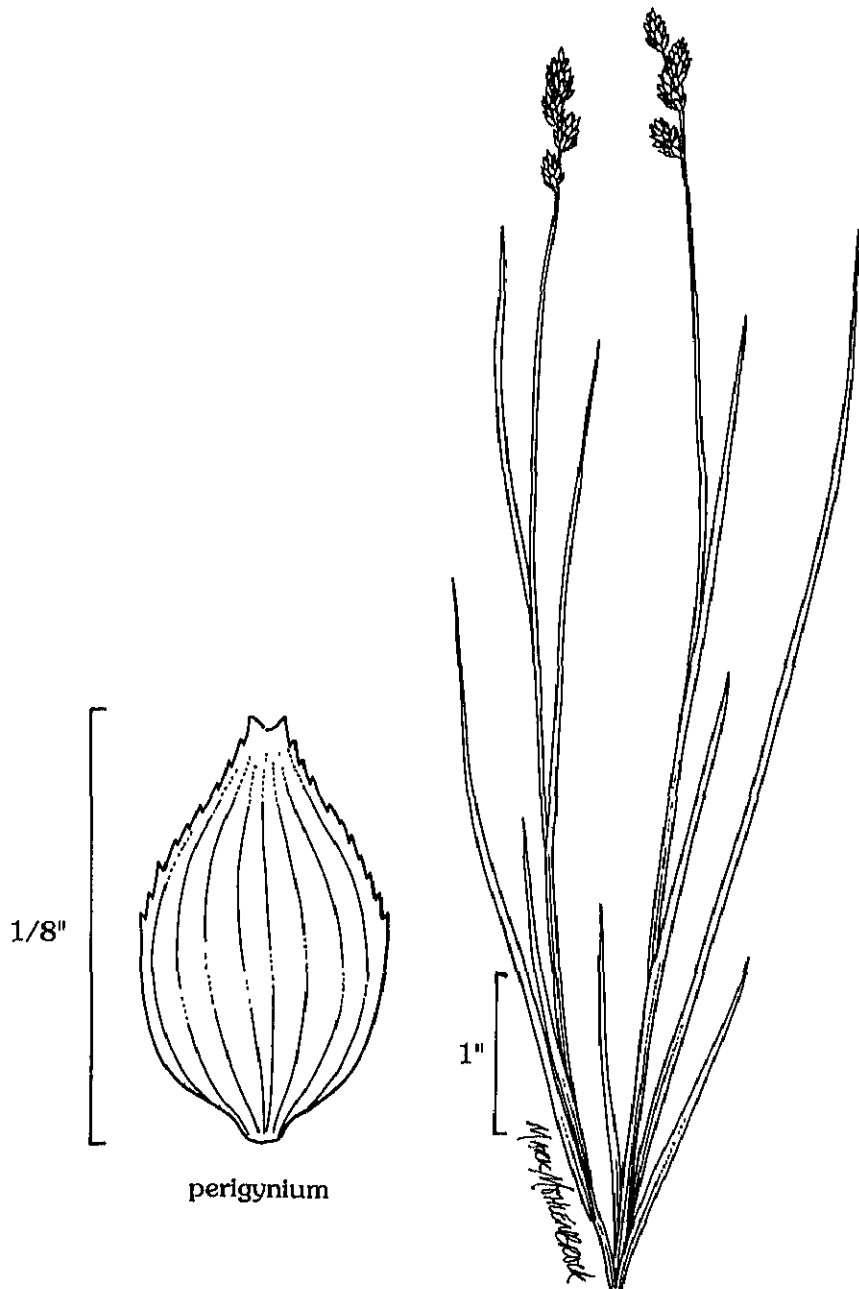
Hoary Sedge

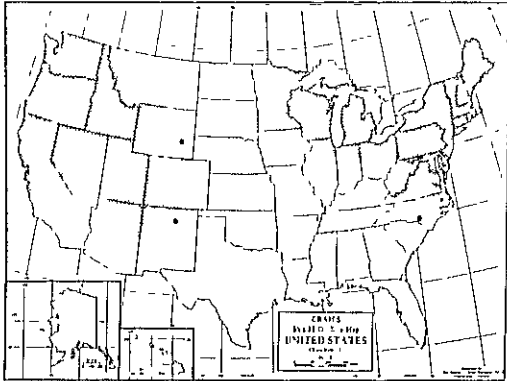
Carex canescens L.

Family: Sedge (Cyperaceae)

May-August

Field Marks: This sedge is recognized by the combination of male flowers at the base of the spikelets, the spikelets gray to silvery in color, and the absence of wings on the perigynia.





Local Notes:

Habitat: Wet meadows, swamps, particularly in the mountains.

Habit: Tufted perennial with short rhizomes.

Stems: Upright, unbranched, up to 2 feet tall, smooth.

Leaves: Elongated, mostly near the base of the plant, rarely longer than the flowering stems, flat, up to 1/6 inch wide, sometimes bluish, smooth

Flowers: Male and female flowers borne separately but in the same spikelet, the male at the base of each spikelet; spikelets pale to silvery, 4-8 in a crowded cluster, each spikelet less than 1/2 inch long.

Scales: Pale and often transparent except for the green midvein, not awned, shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, perigynium straw-colored to silvery, up to 1/8 inch long, not beaked, wingless, ellipsoid to elliptic-ovoid.

Fruits: Achenes lenticular, up to 1/16 inch long.

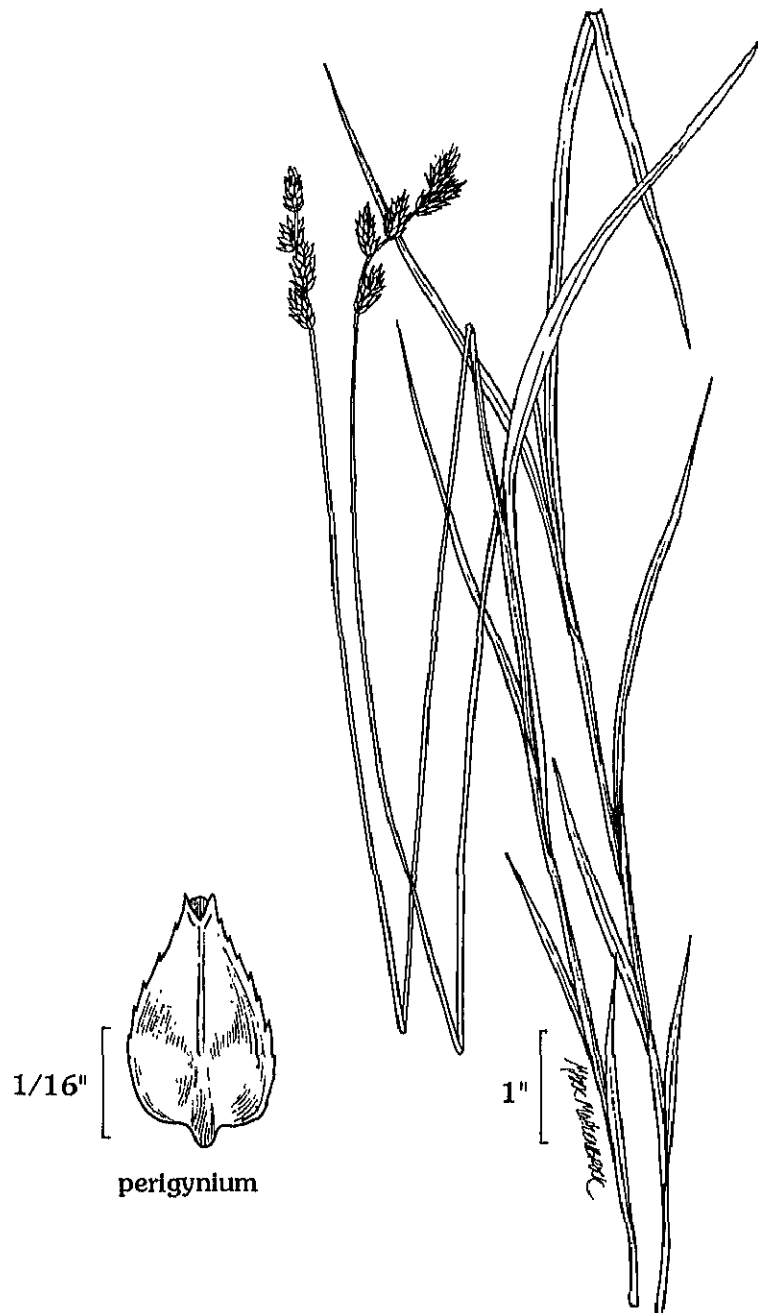
Lesser Panicled Sedge

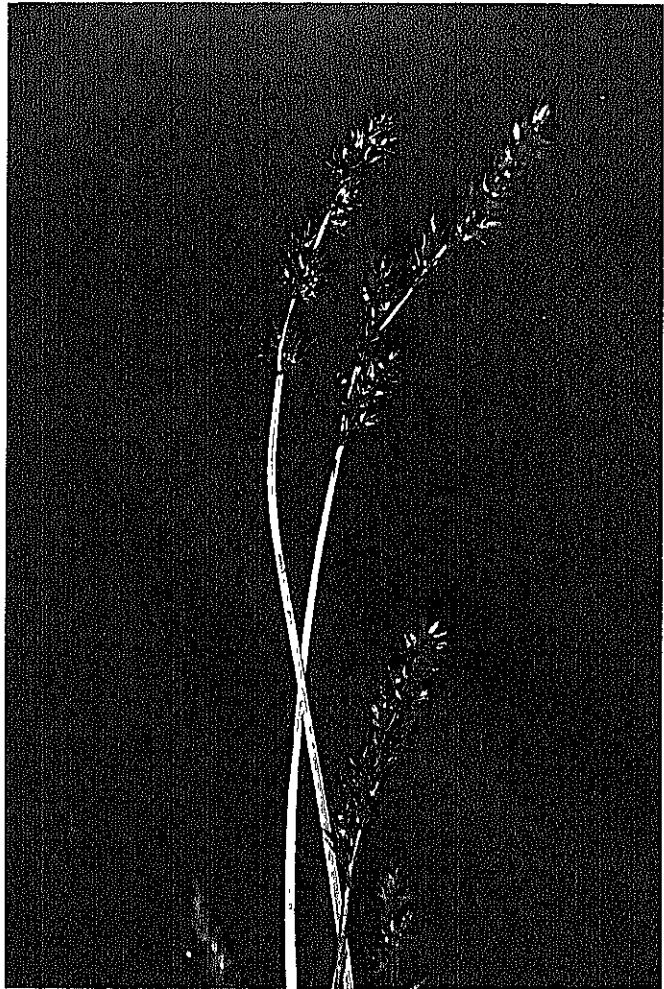
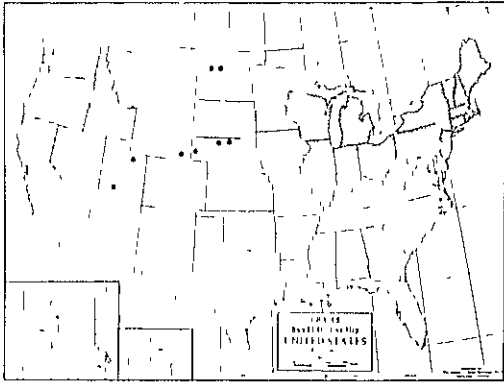
Carex diandra Schrank

Family: Sedge (Cyperaceae)

May-August

Field Marks: This *Carex* is recognized by its spikelets with male flowers at the tip, its 2 styles, its lenticular achenes, the absence of rhizomes, and its crowded, compact inflorescence.





Local Notes:

Habitat: Wet meadows, bogs, swamps, around lakes and ponds.

Habit: Tufted perennial from fibrous roots.

Stems: Upright, triangular, up to 3 feet tall, without hairs.

Leaves: Alternate, elongated, flat, up to 1/6 inch wide, usually as long as or slightly longer than the stem, without hairs; sheaths red-dotted.

Flowers: Borne in spikelets with the male flowers at the tip of each spikelet; spikelets several, crowded into a compact inflorescence up to 2 inches long.

Scales: Lanceolate, pale brown, pointed at the tip but rarely awned.

Sepals: 0.

Petals: 0

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium ovoid to lance-ovoid, up to 1/8 inch long, dark brown, tapering to or contracted to a short beak; beak minutely toothed; styles 2.

Fruits: Achenes lenticular, about 1/20 inch long.

Notes: The achenes are eaten by waterfowl.

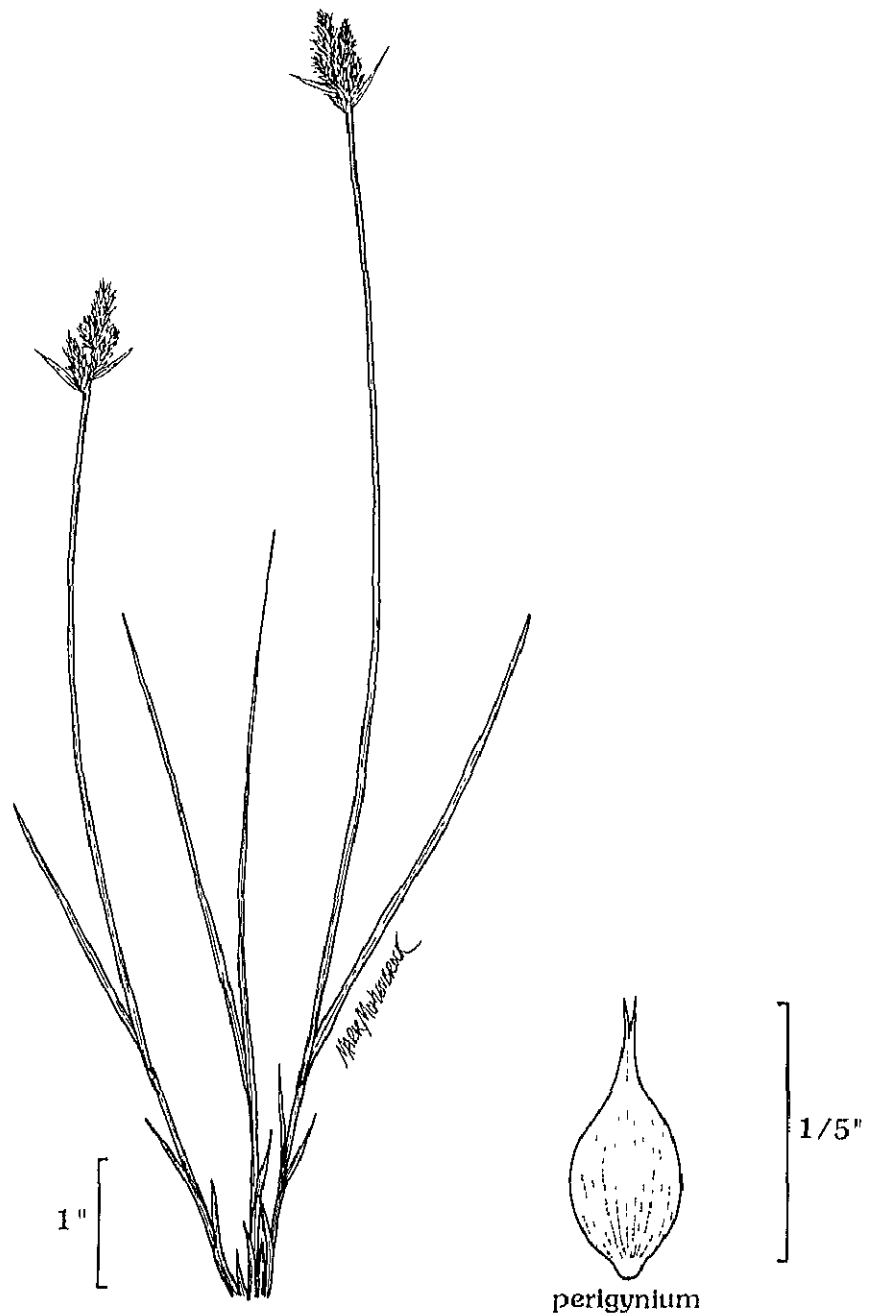
Douglas' Sedge

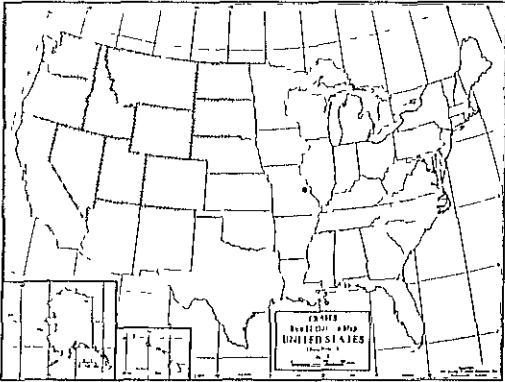
Carex douglasii Boott

Family: Sedge (Cyperaceae)

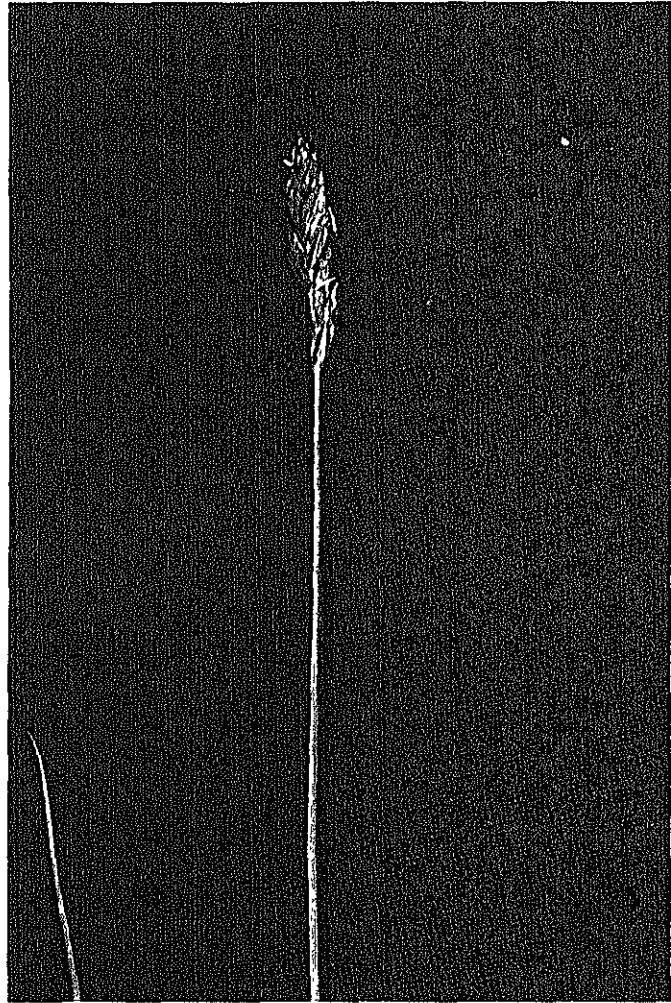
May-August

Field Marks: The crowded spikes are up to 3/4 inch long and are either male or female, with the two sexes usually on separate plants. The perigynia are up to 1/5 inch long, with a prominent beak.





Local Notes:



Habitat: Wet or dry prairies, ditches, tolerating alkaline conditions.

Habit: Perennial herb with long, slender rhizomes.

Stems: Upright, unbranched, up to 18 inches tall, without hairs.

Leaves: Male and female flowers borne in spikes, usually on different plants or, if on the same plant, the male flowers at the top of the spike and the female flowers at the bottom, spikes severely crowded into a head up to 2 inches long, each spike up to 3/4 inch long, scales lanceolate to ovate-lanceolate, pointed or even awned at the tip, pale brown with a green midvein and transparent margins, longer than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3

Pistils: Enclosed in a perigynium, each perigynium ellipsoid to ellipsoid-ovoid, up to 1/5 inch long, tapering to a prominent and minutely toothed beak at the tip, straw-colored to pale brown; stigmas 2.

Fruits: Achenes lenticular, up to 1/10 inch long, smooth.

Notes: The achenes are eaten by birds. This species is a forage plant for livestock.

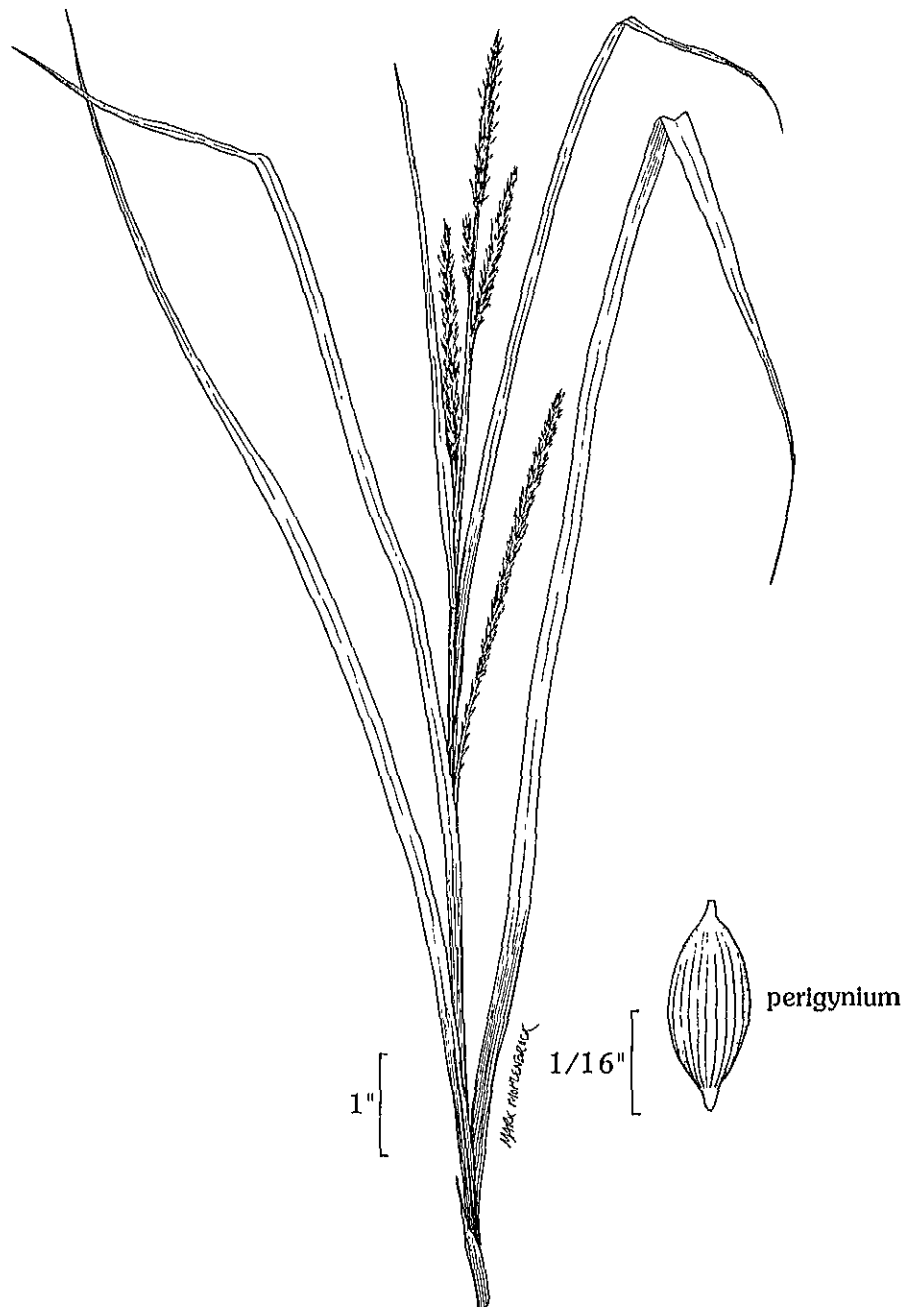
Kellogg's Sedge

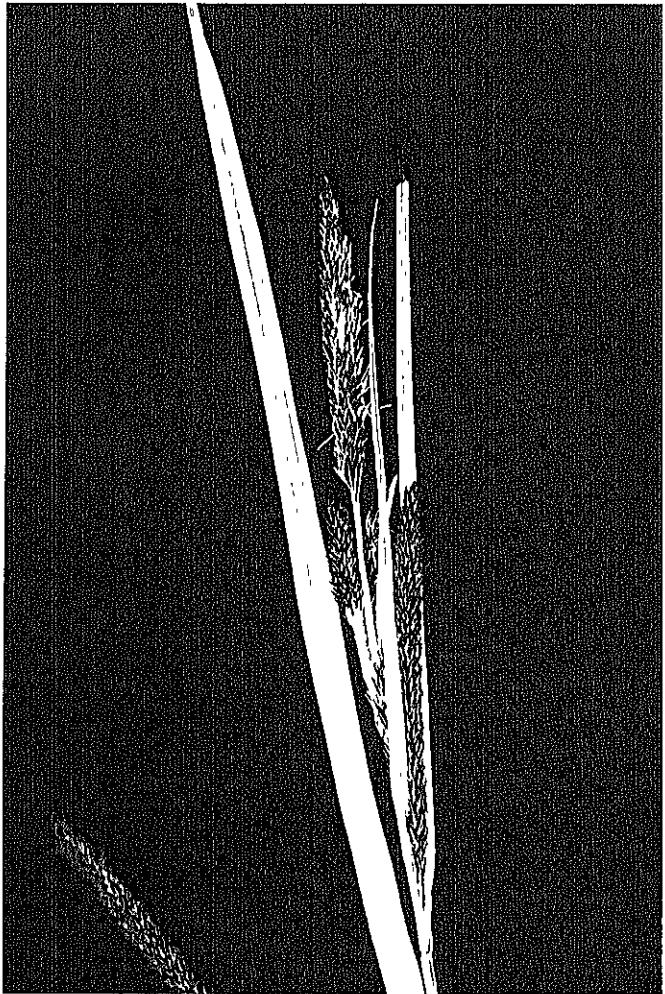
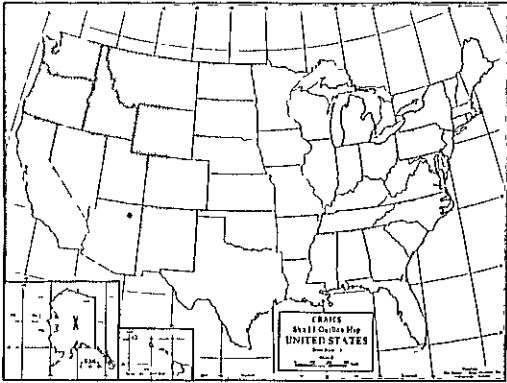
Carex kelloggii W. Boott

Family: Sedge (Cyperaceae)

May-June

Field Marks: The following combination of characters distinguishes this sedge: stigmas 2, achenes lenticular, a solitary male spike (sometimes with a few female flowers), ovoid, granular perigynia with an abrupt beak and a very short stalk at the base.





Local Notes:

Habitat: In and along streams and the edges of lakes; wet meadows, particularly in the mountains.

Habit: Clump-forming perennial with thickened rootstocks

Stems: Upright, up to 1 1/2 feet tall, shorter than the leaves, without hairs but somewhat rough to the touch near the inflorescence.

Leaves: Elongated, flat and sometimes channeled, up to 1/8 inch wide, smooth.

Flowers: Borne in 4-6 spikes, the terminal spike with mostly all male flowers, the others with all female flowers and sessile; spikes up to 2 inches long, up to 1/4 inch wide; scales oblong to ovate, purple-brown to black, narrower and slightly shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, the perigynium ovoid, pale green, granular, finely nerved, up to 1/8 inch long, abruptly beaked with a short, dark-colored beak and a short stalk at the base; stigmas 2.

Fruits: Achenes lenticular, 1/12-1/10 inch long, smooth.

Notes: The achenes are eaten by waterfowl.

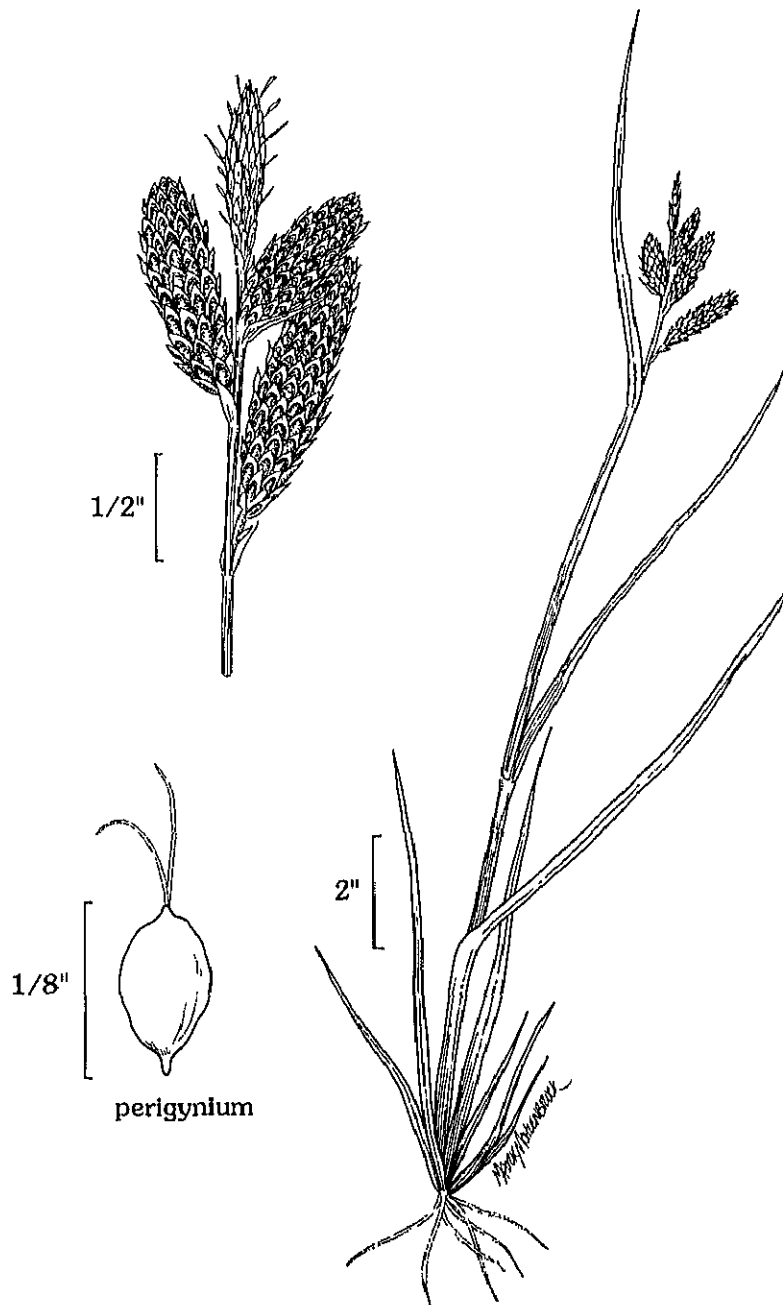
Shore Sedge

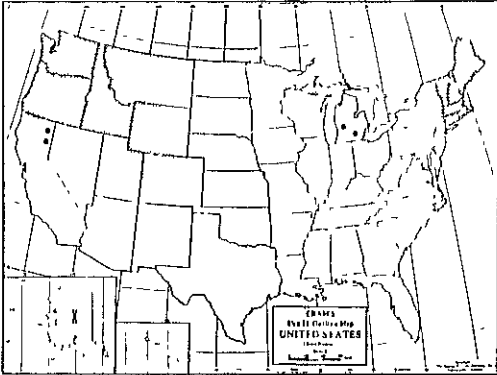
Carex lenticularis Michx.

Family: Sedge (Cyperaceae)

June-September

Field Marks: The distinguishing field characteristics of this sedge are the separate male and female spikes, the 2 stigmas, the lenticular achenes, the brown to blackish scales, and perigynia with nerves on both faces. It differs from the similar *Carex nebrascensis* by its narrower leaves less than 1/6 inch wide and the beak of the perigynium which is not 2-toothed.





Local Notes:

Habitat: Around lakes and ponds, along streams, wet meadows, sometimes in the mountains.

Habit: Densely tufted perennial without rhizomes or with very short rhizomes.

Stems: Upright, up to 2 1/2 feet tall, without hairs.

Leaves: Elongated, narrow, up to 1/6 inch wide, without hairs, usually not surpassing the inflorescence.

Flowers: Crowded into dense spikes, the terminal spike usually with all male flowers or occasionally with a few female flowers at the bottom, the other 2-5 spikes with only female flowers, the spikes up to 2 inches long, up to 1/4 inch thick, the lowest subtended by a leafy bract often surpassing the inflorescence; scales brown to blackish, shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; perigynia ellipsoid to ovoid, somewhat flattened, up to 1/8 inch long with a small, entire beak at the tip, with 3-7 nerves on each face; stigmas 2.

Fruits: Achenes lenticular, about 1/16 inch long, smooth.

Notes: The achenes are eaten by waterfowl.

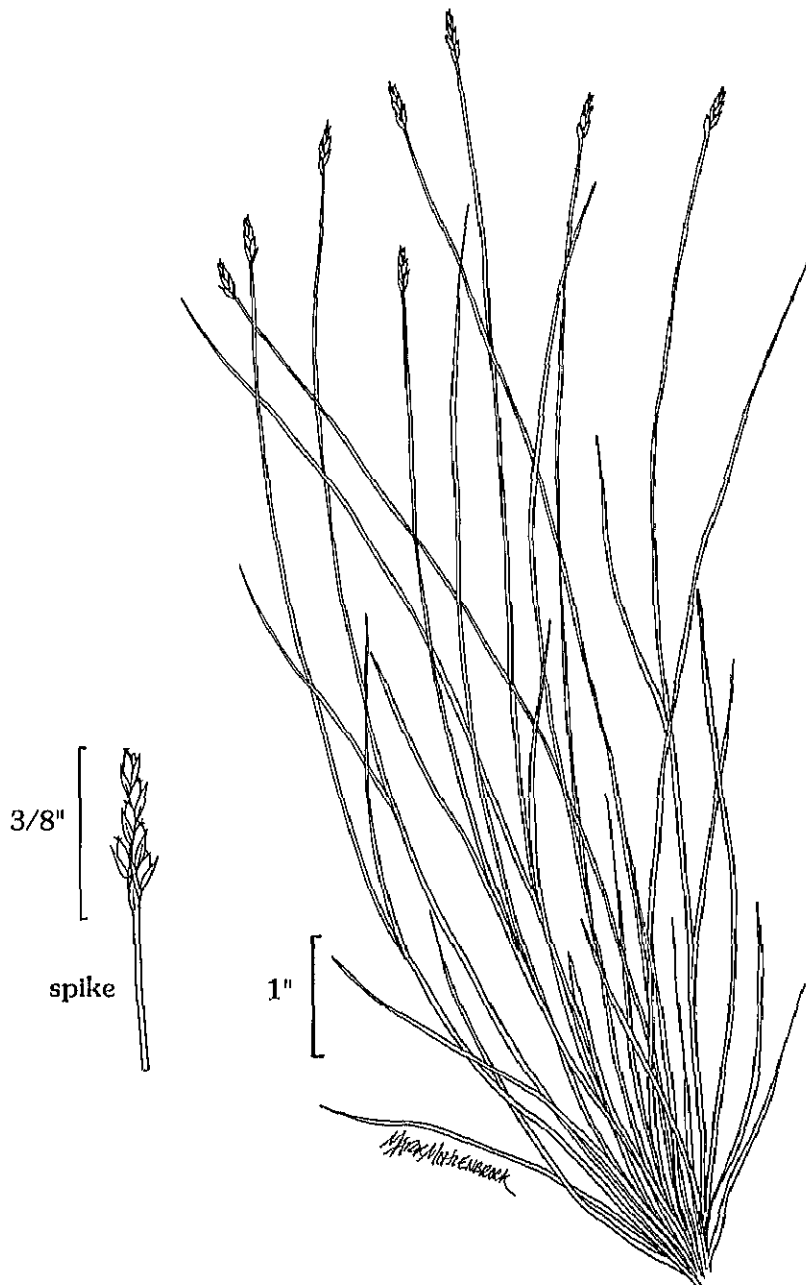
Bristly-stalk Sedge

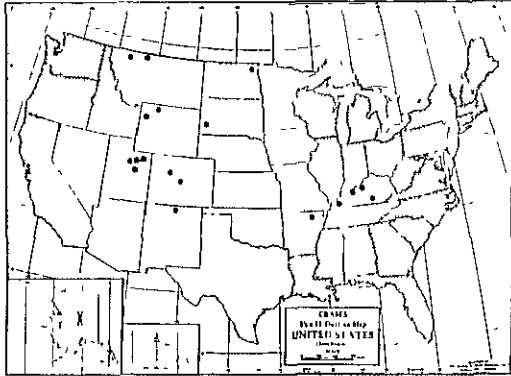
Carex leptalea Wahlenb.

Family: Sedge (Cyperaceae)

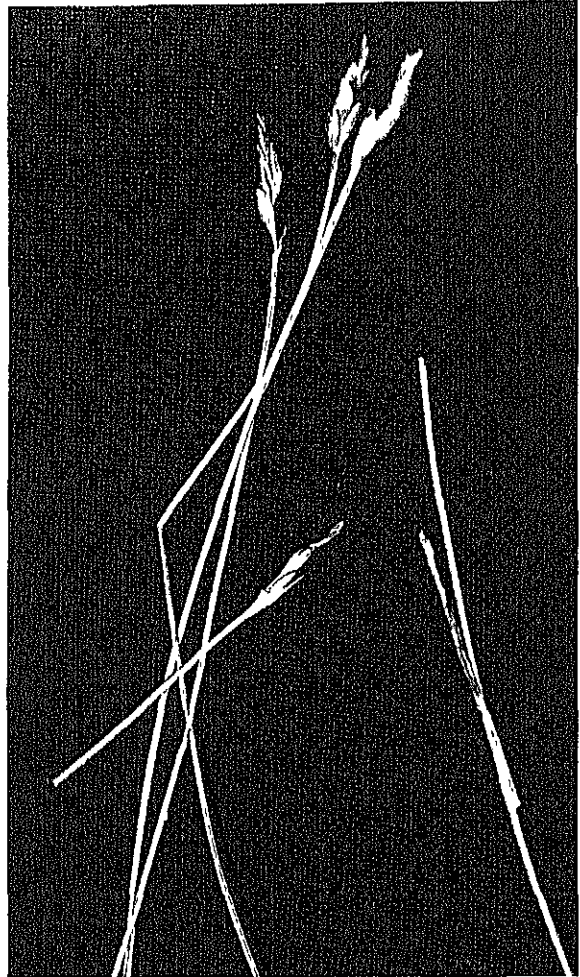
May-August

Field Marks: This rather delicate, slender sedge has a single slender spike at the tip of each stem with the male flowers at the top of the spike. The perigynia completely lack a beak.





Local Notes:



Habitat: Swamps, bogs, fens, around lakes and ponds

Habit: Perennial herb with branched rhizomes.

Stems: Upright, very slender, up to 18 inches tall, smooth.

Leaves: Elongated, very narrow, flat, up to 1/20 inch wide, smooth, nearly always shorter than the stem.

Flowers: Male and female flowers borne in a solitary terminal slender spike with the male flowers at the top, the spike up to 3/4 inch long, not subtended by a bract

Scales: Ovate to lanceolate, rounded or pointed or even awned at the tip, greenish or brownish, shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium ellipsoid, rounded and not beaked at the tip, narrowed to a spongy base, 1/6-1/4 inch long, pale green to straw-colored; stigmas 3.

Fruits: Achenes triangular, about 1/12 inch long, smooth.

Notes: The achenes are eaten by waterfowl.

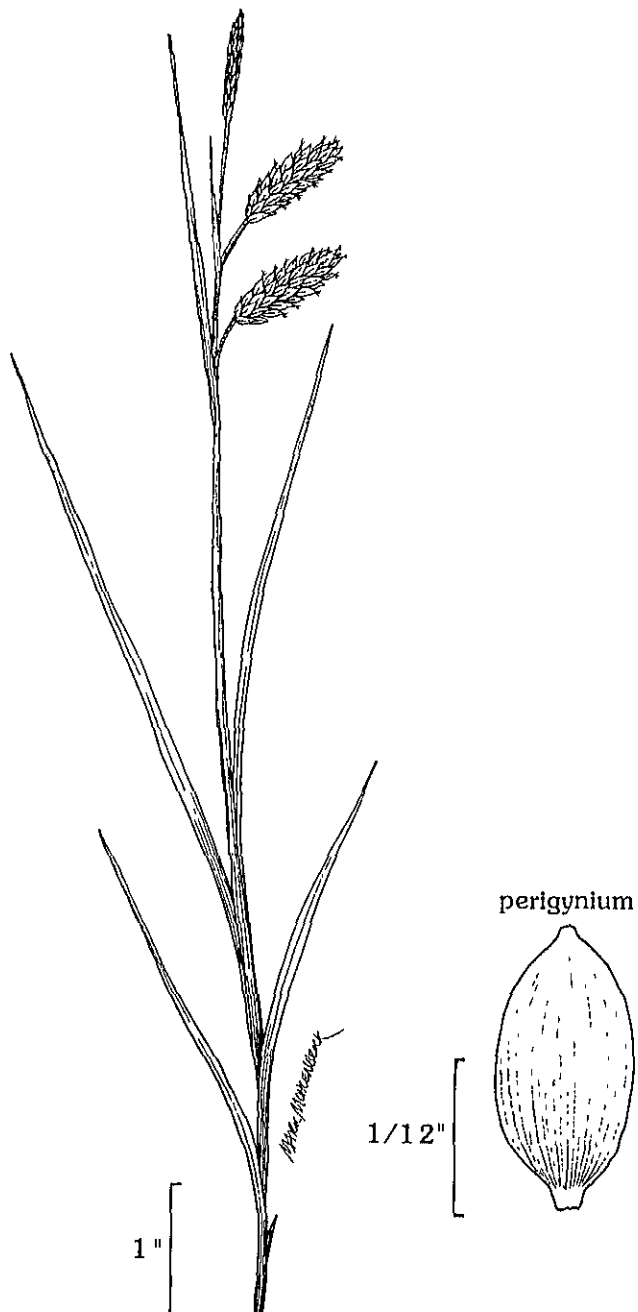
Mud Sedge

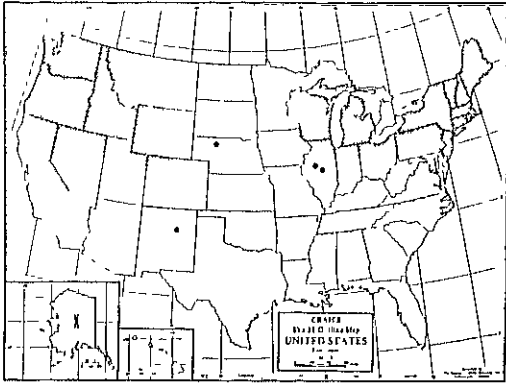
Carex limosa L.

Family: Sedge (Cyperaceae)

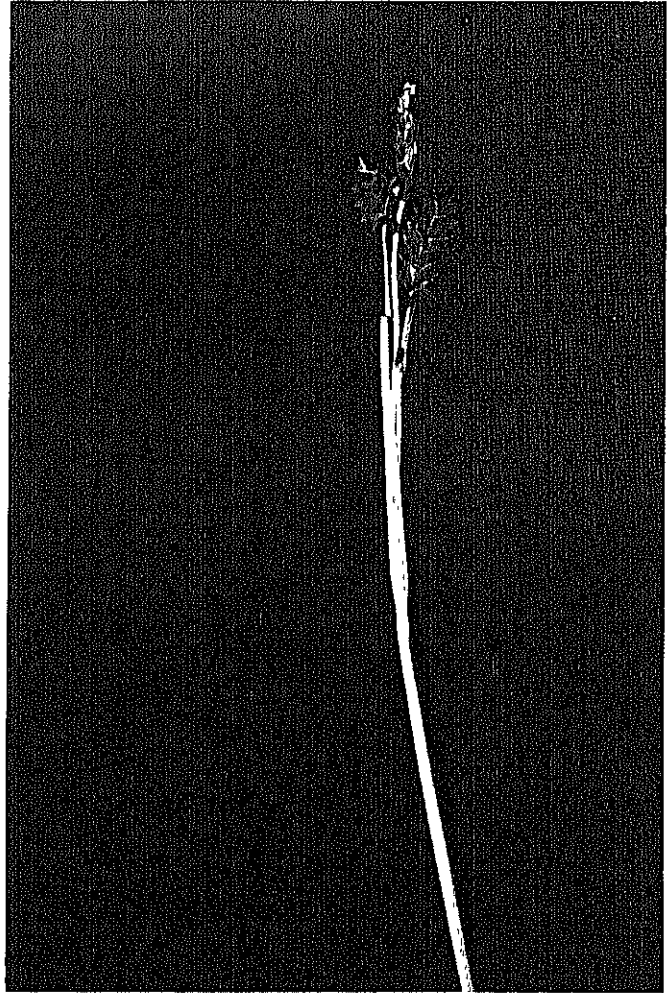
May-June

Field Marks: This distinctive sedge has 3 stigmas, a triangular achene, a solitary male spike on a long stalk, 1-3 female spikes, the lowest ones drooping, long, creeping rhizomes with roots covered by a yellow wool, a perigynium covered by numerous minute dots, and leaves $1/20$ - $1/10$ inch wide





Local Notes:



Habitat: Sphagnum bogs.

Habit: Perennial herb with long-creeping rhizomes and roots covered by a yellow wool.

Stems: Upright, slender, triangular, up to 20 inches tall, without hairs.

Leaves: Very narrow and elongated, shorter than the stem, up to 1/10 inch wide, flat but channelled, without hairs.

Flowers: Borne in spikes, the male spike solitary and terminal, the other 1-3 spikes female; male spike up to 1/4 inch thick, on an upright stalk; female spikes oblongoid, up to 1 1/4 inches long, up to 1/3 inch thick, at least the uppermost on slender, drooping stalks; scales ovate, shorter than the perigynia, brown.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, the perigynium ovoid, abruptly beaked at the tip, with a short stalk at the base, flattened, greenish or straw-colored, up to 1/6 inch long, up to 1/10 inch wide, smooth, covered by numerous dots; stigmas 3.

Fruits: Achenes triangular, about 1/10 inch long.

Notes: The achenes are sometimes eaten by small mammals.

Wood-rush Sedge

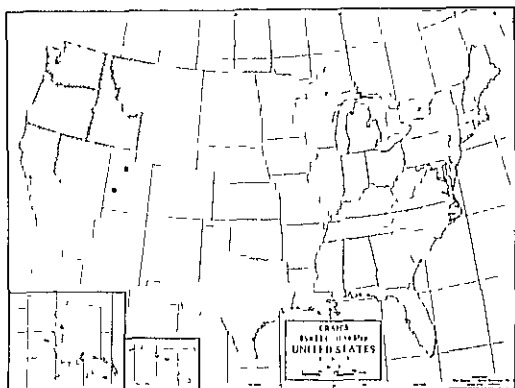
Carex luzulina Olney

Family: Sedge (Cyperaceae)

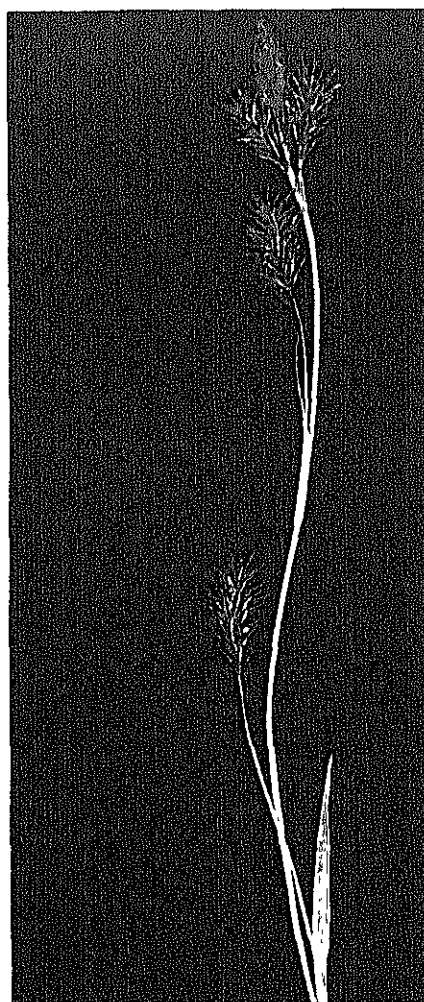
May-July

Field Marks: The distinguishing features of this sedge are its flattened, lanceoloid perigynia that have small teeth along the edges near the tip. There is usually a separate male spikelet above the female ones.





Local Notes:



Habitat: Wet meadows, bogs, other moist areas

Habit: Perennial herb with fibrous roots

Stems: Upright, up to 2 feet tall, smooth.

Leaves: Elongated, nearly all crowded near the base of the plant and not longer than the flowering stems, up to 6 inches long, a little less than 1/2 inch wide, smooth

Flowers: Borne in spikelets, with 2-6 spikelets not overlapping at the tip of the stem, the inflorescence subtended by a short bract; terminal spike usually male, up to 1 1/2 inches long; female spikes similar but a little thicker, up to 1 1/2 inches long.

Scales: Lanceolate, brown, never longer than the perigynia, smooth or slightly hairy along the mid-vein

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in perigynia; each perigynium lanceoloid, up to 1/4 inch long, smooth or rarely with a few hairs when young, flattened, ciliate and minutely toothed near the tip, tapering to a tiny beak, stigmas 3

Fruits: Achenes triangular, smooth, up to 1/12 inch long.

Notes: The achenes are eaten by birds and small mammals.

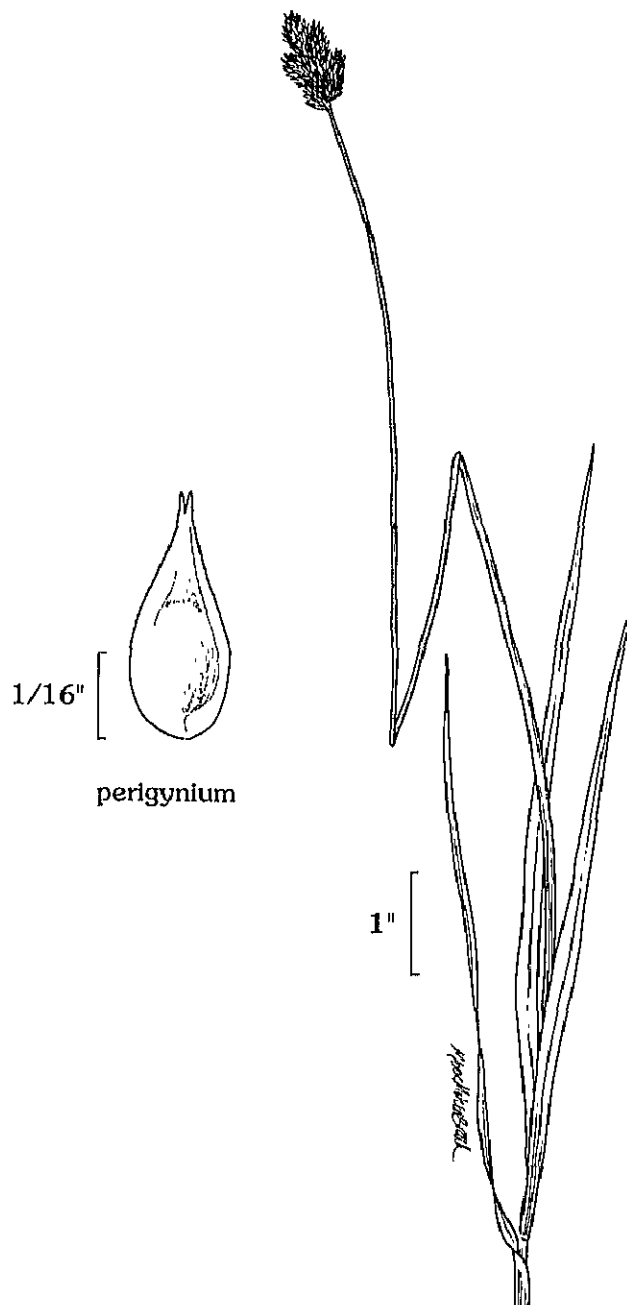
Small-wing Sedge

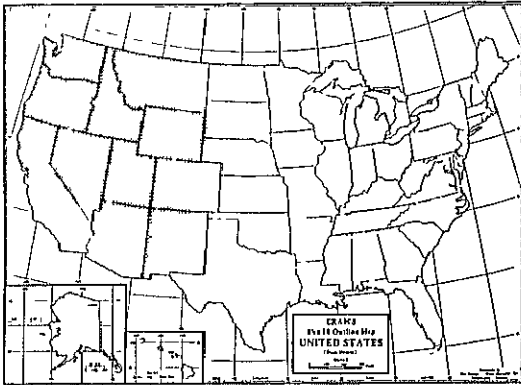
Carex microptera Mackenz.

Family: Sedge (Cyperaceae)

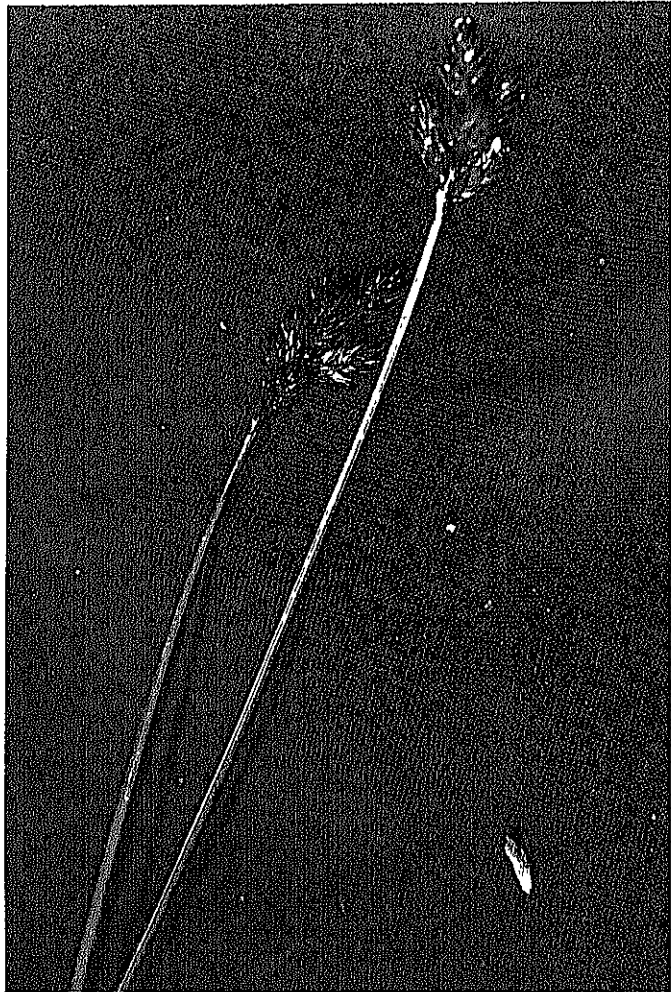
May-August

Field Marks: This sedge has 3-10 spikelets crowded into a dense head. The male flowers are borne at the base of each spikelet, and the straw-colored, flattened perigynia usually have a brown-tipped beak





Local Notes:



Habitat: Wet meadows, fens.

Habit: Tufted perennial without creeping rhizomes.

Stems: Upright, triangular, up to 2 feet tall, smooth or rough to the touch.

Leaves: Narrow, elongated, up to 1/4 inch wide, without hairs, usually shorter than the stems.

Flowers: Male and female flowers borne separately in the same spikelet, the male flowers at the base of the spikelet; spikelets 3-10, crowded into a dense head up to 1 inch long.

Scales: Lanceolate, brownish, shorter than the perigynia.

Sepals: 0

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium straw-colored, but usually with a brown-tipped beak, lanceolate to ovate, 1/6-1/4 inch long, smooth, flattened; stigmas 2.

Fruits: Achenes lenticular, about 1/16 inch long

Notes: This species is distinguished with difficulty from *C. festuella*, *C. ebenea*, and *C. haydeniana*. The achenes are eaten by birds and small mammals.

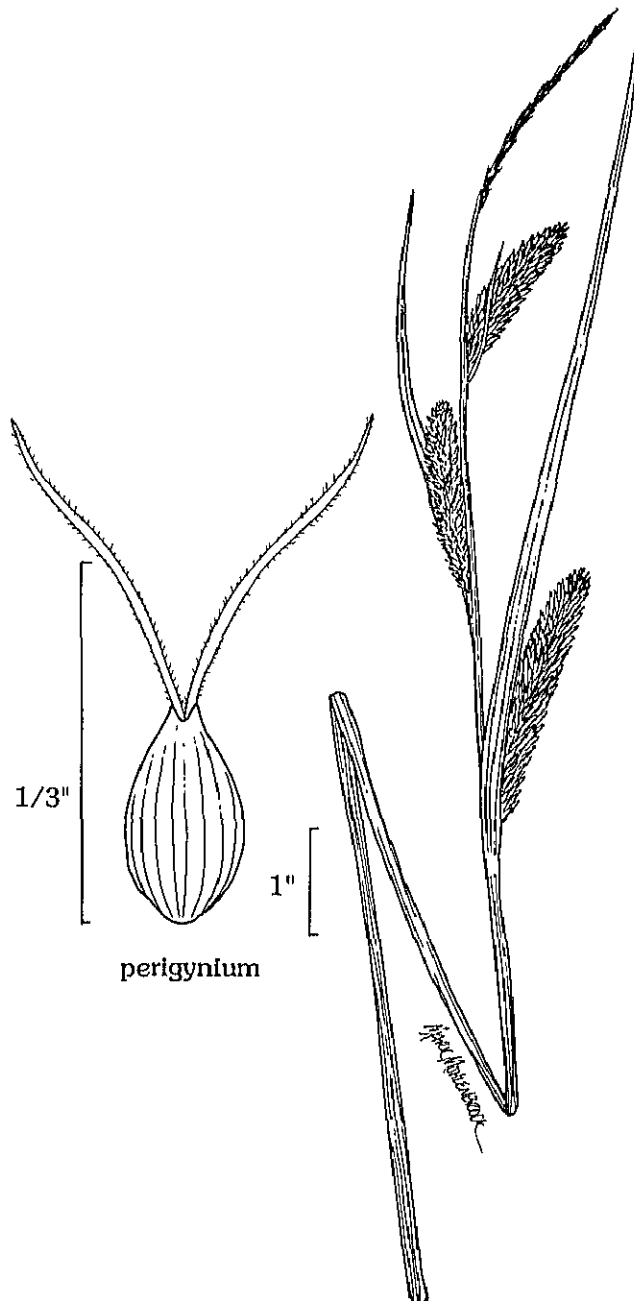
Nebraska Sedge

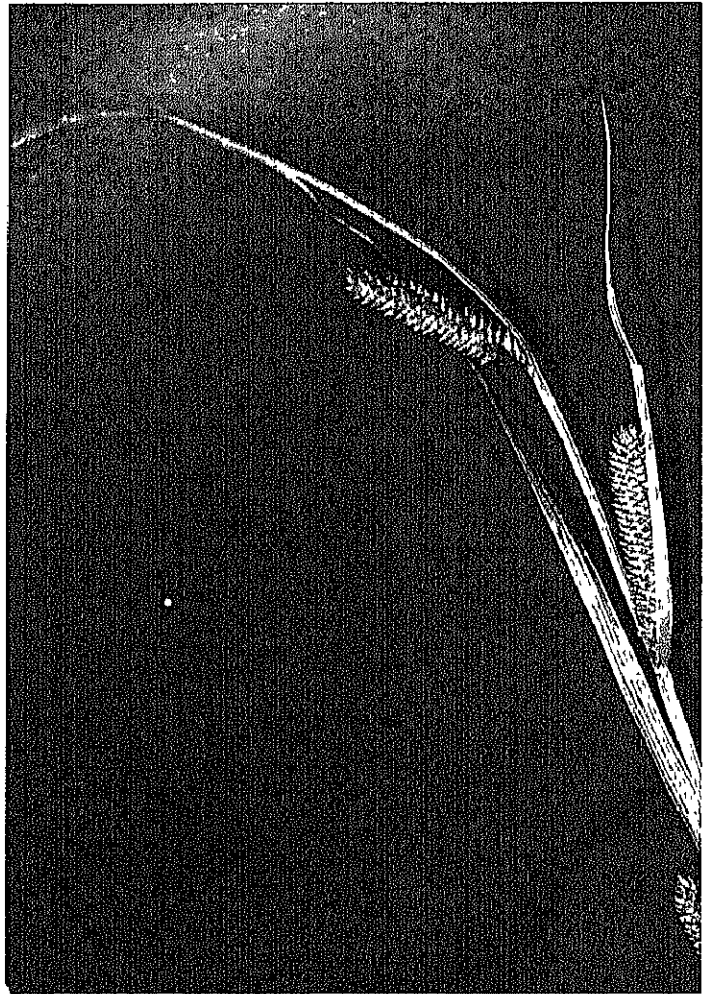
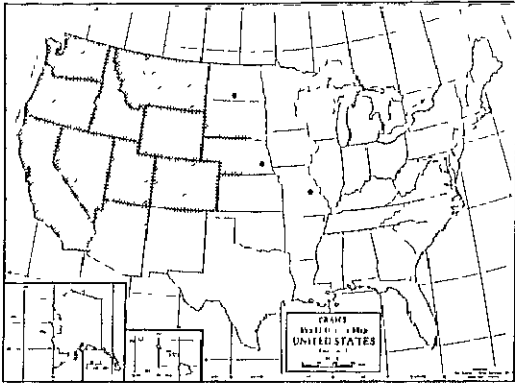
Carex nebrascensis Dewey

Family: Sedge (Cyperaceae)

May-September

Field Marks: This sedge is recognized by its bluish leaves, its 1-2 terminal male spikes, 2 stigmas, and short-beaked perigynia with 5-10 veins on each face.





Local Notes:

Habitat: Swamps, wet meadows, around lakes and ponds.

Habit: Perennial sedge from creeping rhizomes.

Stems: Stems upright, rather stout, triangular, up to 3 feet tall, smooth or somewhat roughened.

Leaves: Alternate, elongated, shorter or longer than the stem, up to 1/2 inch wide, smooth or sometimes roughened along the edges, often bluish, sheaths yellow-brown.

Flowers: Borne in spikes, the male flowers usually in separate spikes from the female flowers, but on the same plant; male spikes 1 or 2, above the female spikes, narrowly cylindrical, up to 2 inches long; female spikes 2-5, up to 3 inches long, the lowest spike subtended by a leafy bract as long as or longer than the inflorescence.

Scales: Lanceolate, pointed at the tip, longer or shorter than the perigynia, with a green or pale midvein.

Sepals: 0.

Petals: 0.

Stamens: 3

Pistils: Enclosed in a perigynium; each perigynium ellipsoid to obovoid, abruptly tapering to a very short, 2-cleft beak, straw-colored to brown, up to 1/5 inch long, with 5-10 veins on each face; styles 2.

Fruits: Achenes lenticular, smooth, up to 1/8 inch long.

Notes: The uppermost female spike sometimes has a few male flowers near its tip. This sedge is sometimes an important forage species for livestock. The achenes are eaten by waterfowl.

Clustered Field Sedge

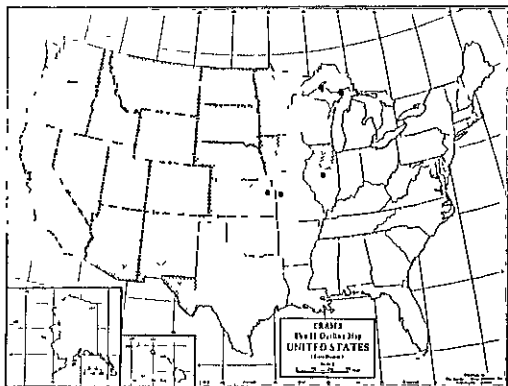
Carex praegracilis W. Boott

Family: Sedge (Cyperaceae)

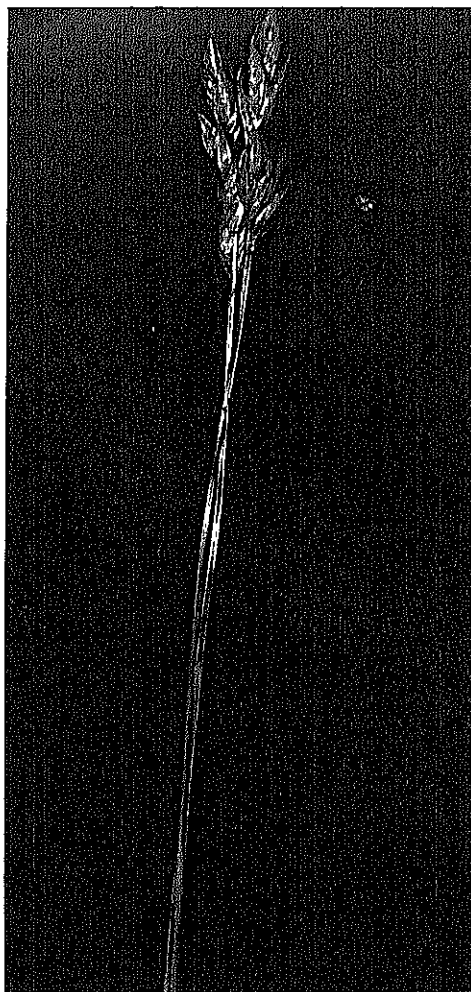
May-September

Field Marks: This sedge is recognized by its coarse, black, scaly rhizomes, its spikelets with male flowers at the tip, its 2 styles, its lenticular achenes, at least the lowest spikelet not crowded with the rest, and its perigynia at least 1/12 inch long.





Local Notes:



Habitat: Most moist habitats from sea level to the mountains, often in alkaline soils.

Habit: Perennial herb with coarse, black, scaly rhizomes.

Stems: Upright, 1 or few together, up to 2 feet tall, smooth, triangular.

Leaves: Alternate, elongated, mostly all near the base of the plant, flat, up to 1/6 inch wide, not hairy.

Flowers: Borne in spikelets, with the male flowers at the tip of each spikelet; spikelets 6-25, crowded into a cylindrical head, except the lowest spikelet not crowded into the head, each spikelet less than 1/2 inch long.

Scales: Pale brown, usually with a green mid-vein, as long as or longer than the perigynium.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium pale brown to brown to brown-black, at least 1/12 inch long, ovoid to ellipsoid, with a short, prominent beak, usually with minute teeth on the beak; styles 2.

Fruits: Achenes lenticular, up to 1/16 inch long.

Notes: This species is valuable as a forage plant for livestock. It occurs from the prairies and plains to moderate elevations in the mountains. It is characteristic of alkaline flats.

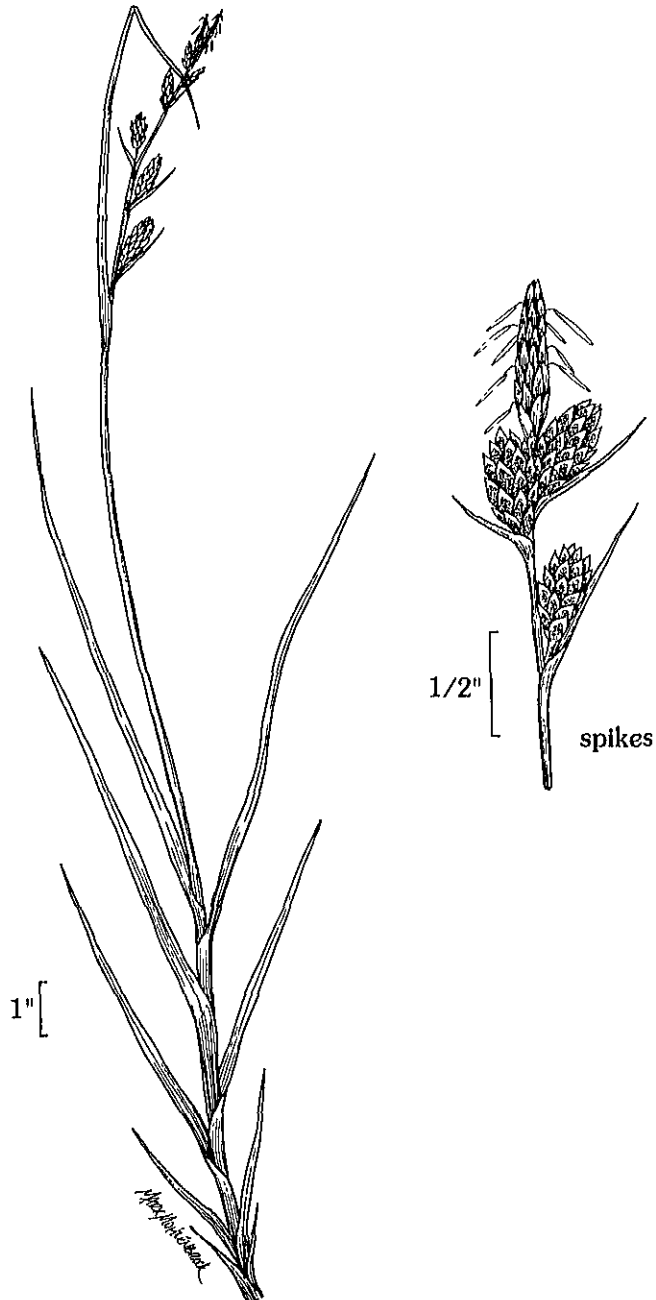
Raynolds' Sedge

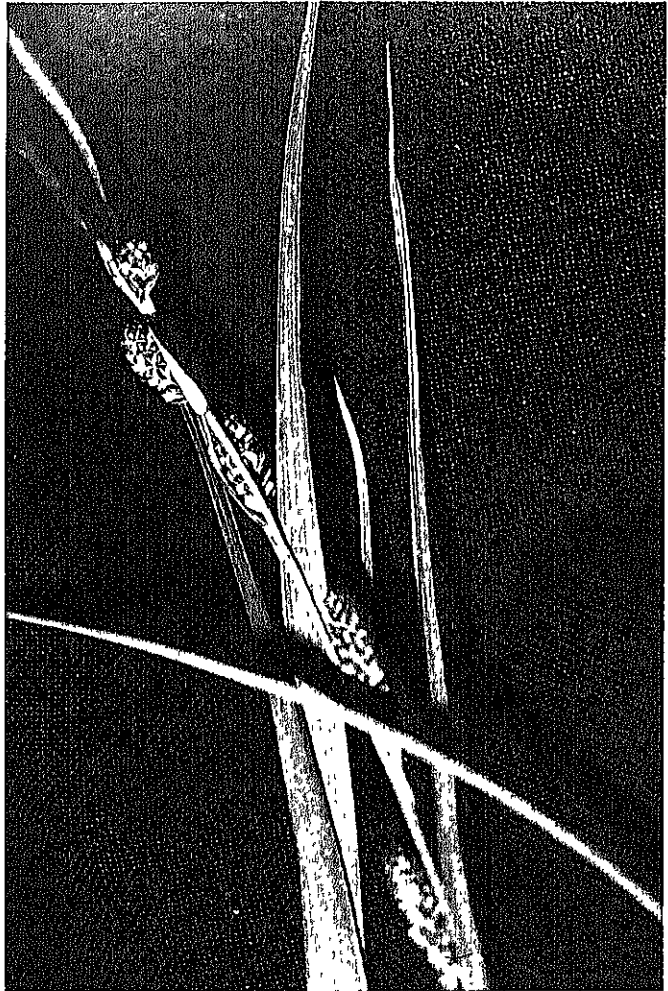
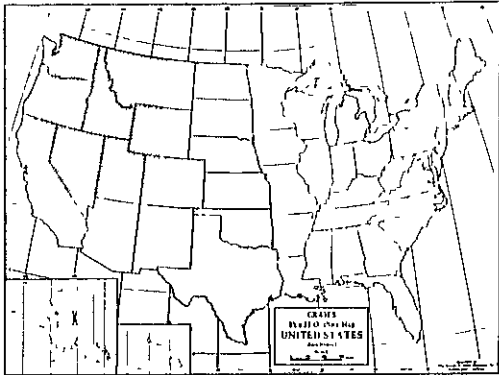
Carex raynoldsii Dewey

Family: Sedge (Cyperaceae)

June-August

Field Marks: This species is distinguished by the solitary, rather thick, male spike and 2-5 upright female spikes, the red-brown to black scales, and the plump, green, ellipsoid perigynia with a minute beak





Local Notes:

Habitat: Meadows, open slopes, particularly in the mountains.

Habit: Tufted perennial herb with short, stout rhizomes.

Stems: Upright, triangular, up to 2 feet tall, not hairy.

Leaves: Alternate, elongated, narrow, up to 1/3 inch wide, flat, not hairy.

Flowers: Male and female borne in separate spikes; male spike solitary, terminal, up to 3/4 inch long, up to 1/4 inch thick; female spikes 2-5, all upright, sessile except for the lowermost, up to 1 inch long, up to 2/5 inch thick.

Scales: Ovate, shorter and narrower than the perigynia, red-brown to black.

Sepals: 0.

Petals: 0.

Stamens: 3

Pistils: Enclosed in a perigynium; perigynia ellipsoid, green, plump, up to 1/5 inch long, smooth, minutely beaked, with 2 conspicuous and several obscure nerves; stigmas 3.

Fruits: Achenes triangular, up to 1/8 inch long, smooth.

Notes: The leaf bases from the preceding year are often persistent at the base of the plant. At maturity, the green perigynia contrast markedly with the subtending red-brown to black scales. The achenes are eaten by waterfowl.

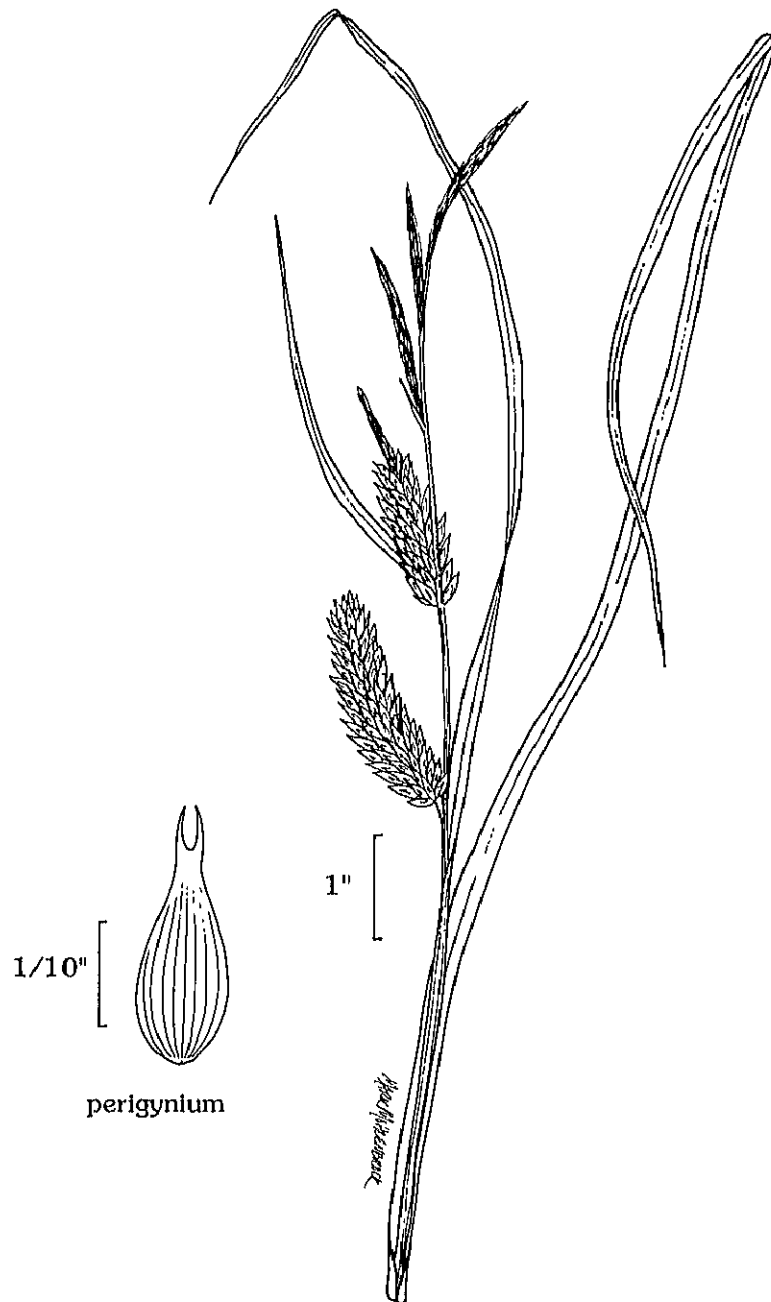
Beaked Sedge

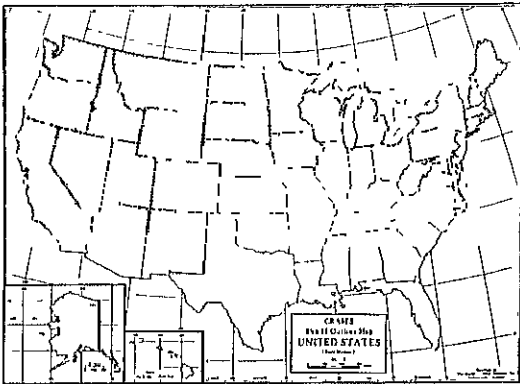
Carex rostrata J. Stokes

Family: Sedge (Cyperaceae)

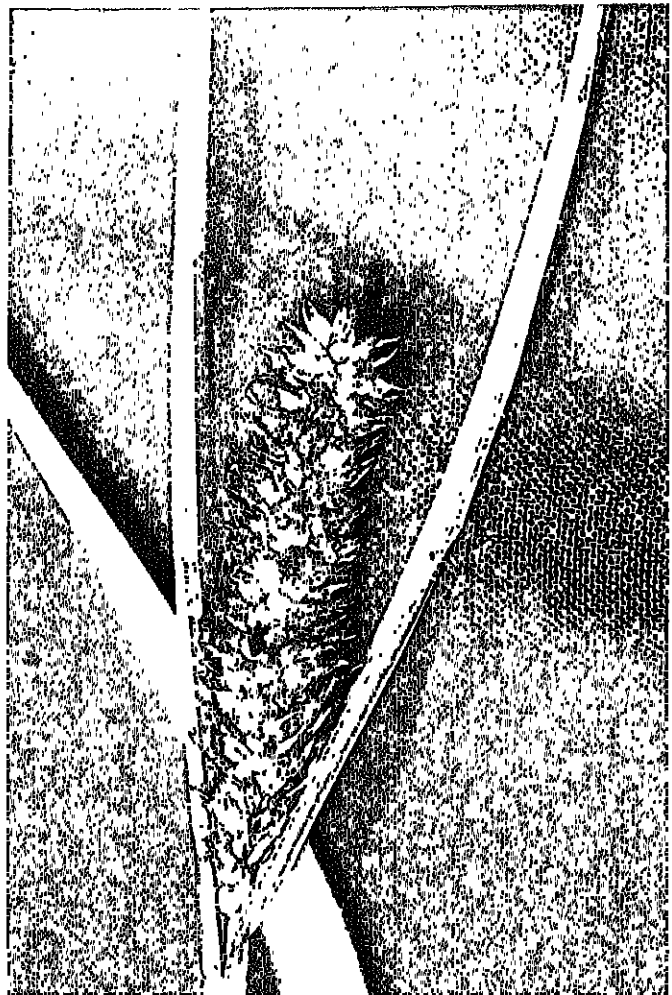
May-August

Field Marks: This sedge has male and female flowers in separate spikes, densely crowded perigynia swollen at the base and conspicuously beaked at the tip, and stems usually spongy-inflated at the base.





Local Notes:



Habitat: Along streams, around lakes and ponds, wet meadows, swamps, from sea level to the mountains.

Habit: Perennial herb from stout, elongated rhizomes.

Stems: Upright, triangular, up to 3 1/2 feet tall, smooth, usually spongy-inflated at the base.

Leaves: Several, elongated, flat, up to 1/2 inch wide, not hairy, with evident cross-walls

Flowers: Borne in spikes, the male in 2-4 upper spikes, up to 3 inches long, the female in several lower, thicker spikes up to 4 inches long; scales pointed or awned at the tip, usually straw-colored, shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; each perigynium pale brown, smooth, shiny, up to 1/6 inch long with a conspicuous beak about 1/4 the length, ovoid, broadly rounded below, with 8-16 conspicuous nerves; stigmas 3.

Fruits: Achenes triangular, up to 1/10 inch long, with a persistent, twisted style.

Notes: The achenes are eaten by waterfowl.

Russet Sedge

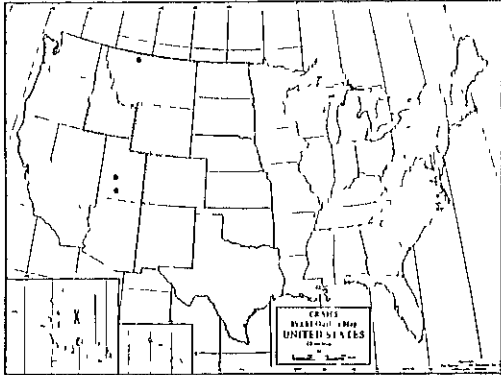
Carex saxatilis L.

Family: Sedge (Cyperaceae)

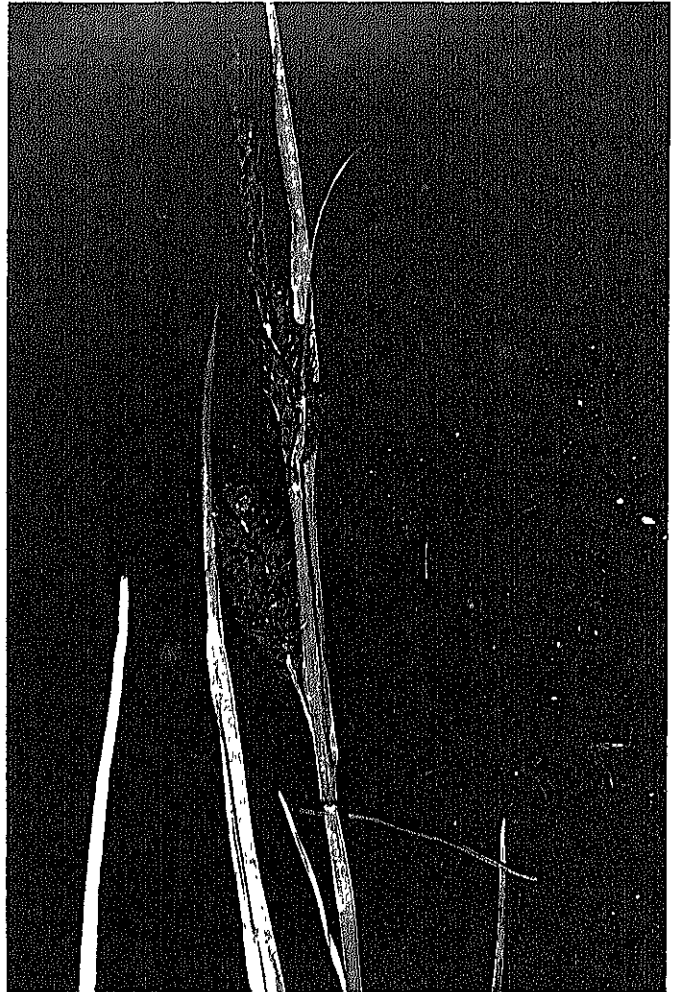
May-August

Field Marks: The distinguishing features of this sedge are the male and female flowers borne in separate spikes, the dark colored scales, and the ellipsoid perigynium abruptly contracted into a very short beak.





Local Notes:



Habitat: Edge of ponds, along streams, wet meadows, fens.

Habit: Perennial herb with extensively creeping rhizomes.

Stems: Upright, slender, triangular, up to 2 feet tall, not hairy.

Leaves: Alternate, elongated, narrow, usually not surpassing the stem (except for the lowermost bract), up to 1/6 inch wide, not hairy, usually septate, particularly on the sheaths.

Flowers: Male and female borne in separate spikes; male spikes 1-2, terminal, up to 1 1/2 inches long, up to 1/4 inch thick, dark in color; female spikes 1-2, up to 1 1/2 inches long, up to 1/2 inch thick, the lowest on a stalk and sometimes nodding.

Scales: Lanceolate to elliptic, shorter and narrower than the perigynia, usually dark-colored, rarely straw-colored.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; perigynia crowded, ascending, usually dark-colored, rarely straw-colored, ellipsoid, up to 1/4 inch long, abruptly contracted into a very short beak, smooth; stigmas 2.

Fruits: Achenes lenticular, about 1/10 inch long, smooth.

Notes: The achenes are sometimes eaten by waterfowl.

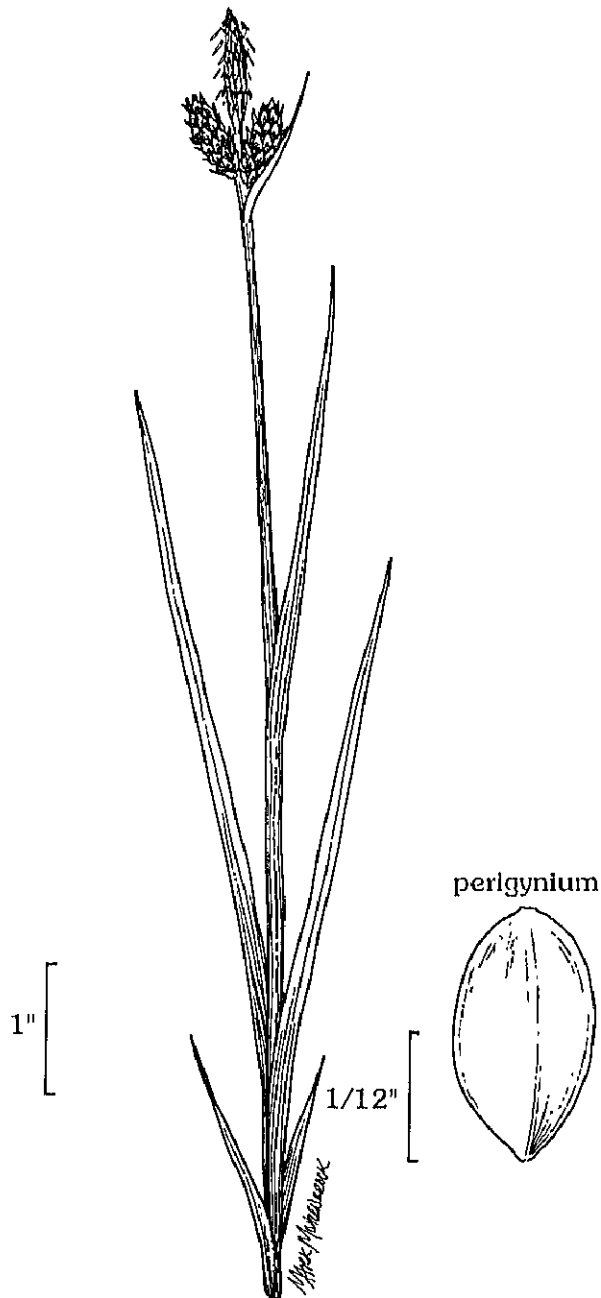
Holm's Rocky Mountain Sedge

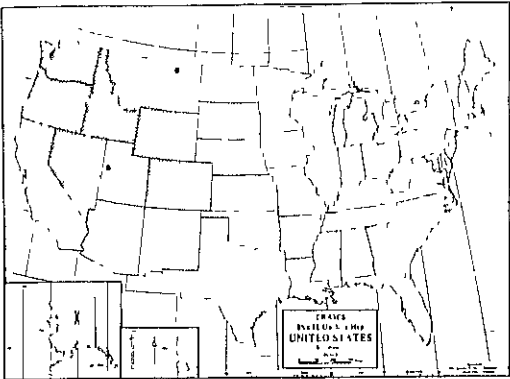
Carex scopulorum Th. Holm

Family: Sedge (Cyperaceae)

May-August

Field Marks: This species is recognized by its black scales subtending often blackish, ellipsoid perigynia with a minute beak.





Local Notes:



Habitat: Along streams, wet meadows, around lakes and ponds, open slopes, particularly in the mountains and sometimes above timberline.

Habit: Perennial herb from elongated rhizomes, often sod-forming.

Stems: Upright, triangular, up to 1 1/4 feet tall, without hairs.

Leaves: Alternate, elongated, narrow, up to 1/4 inch wide, flat, not hairy, not surpassing the stems

Flowers: Male and female flowers borne separately in 3-6 spikes, the terminal spike nearly always male only, the lowest spike nearly always female only, the other spikes usually with male flowers above and female flowers below; spikes up to 1 1/4 inches long, upright, all but the lowest one sessile.

Scales: Black-purple, shorter than the perigynia.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium; perigynia ellipsoid, usually purple-black, up to 1/6 inch long, minutely beaked, smooth, without conspicuous veins; stigmas 2.

Fruits: Achenes lenticular, up to 1/12 inch long.

Notes: In some areas, this species seems to grade into *C. aquatilis*. The achenes are eaten by waterfowl.

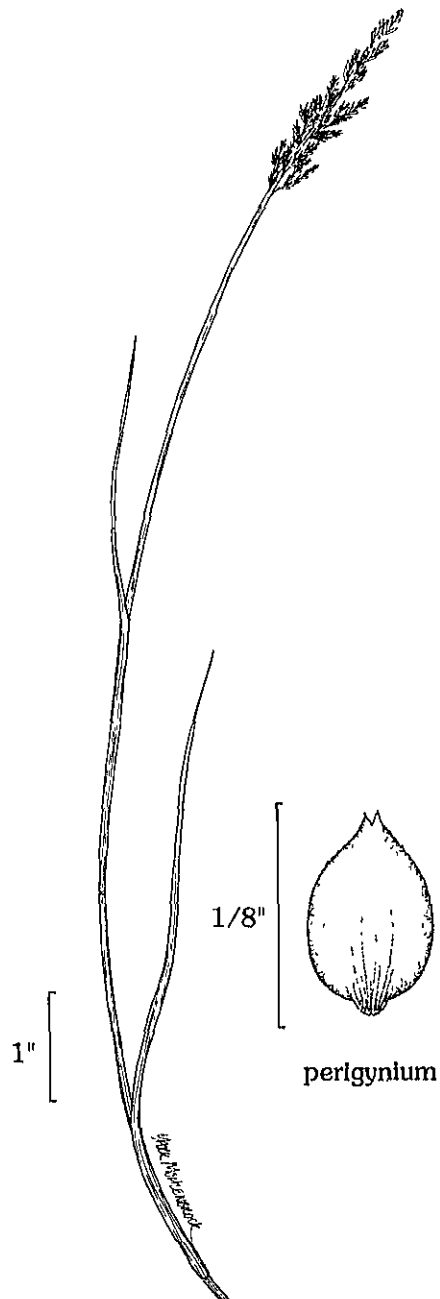
Short-beak Sedge

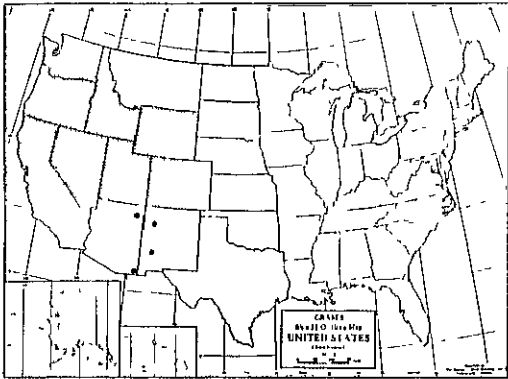
Carex simulata Mackenz.

Family: Sedge (Cyperaceae)

May-August

Field Marks: This sedge is distinguished by the male flowers at the tip of the spikelets, the 2 stigmas, the lenticular achenes, and the tiny, brown, shiny perigynia less than 1/8 inch long with a minute beak





Local Notes:



- Habitat:** Wet meadows, along streams, in bogs, swamps.
- Habit:** Perennial herb with long, brown rhizomes.
- Stems:** Upright, triangular, up to 1 1/2 feet tall, longer than the leaves.
- Leaves:** Alternate, elongated, narrow, up to 1/6 inch wide, flat, not hairy.
- Flowers:** Male and female borne in the same spikelet, with the male flowers at the tip; spikelets 8-25, less than 1/2 inch long, more or less crowded into a head up to 1 1/2 inches long; bracts subtending the spikelets not leaf-like.
- Scales:** Lanceolate, brown except for the paler edges, longer than the perigynia.
- Sepals:** 0.
- Petals:** 0.
- Stamens:** 3.
- Pistils:** Enclosed in a perigynium; perigynia very small, ovoid to ellipsoid, up to 1/8 inch long, minutely beaked, brown, shiny, smooth, minutely toothed, especially near the tip; stigmas 2.
- Fruits:** Achenes lenticular, ellipsoid to obovoid, up to 1/16 inch long, smooth
- Notes:** Some plants may have all male spikelets or all female spikelets. The achenes are sometimes eaten by birds.

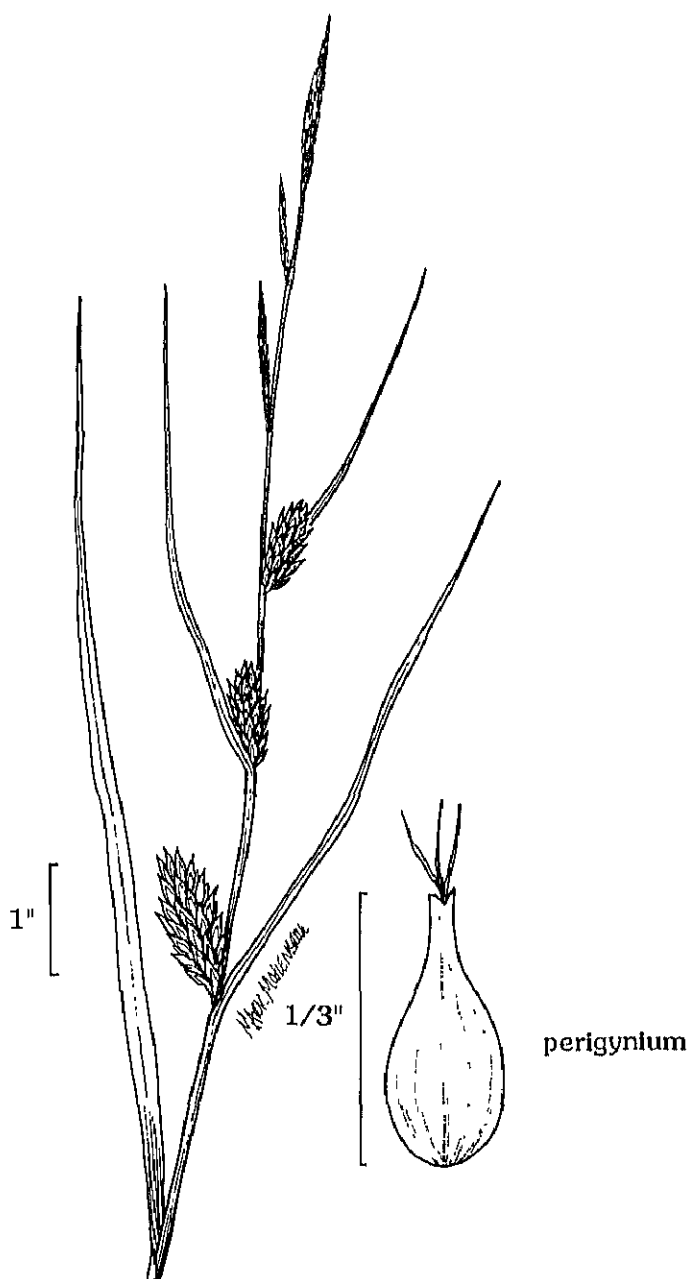
Inflated Sedge

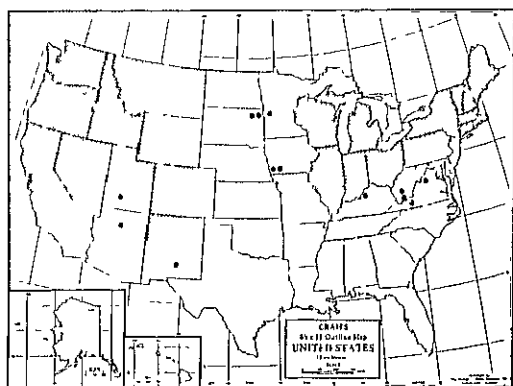
Carex vesicaria L.

Family: Sedge (Cyperaceae)

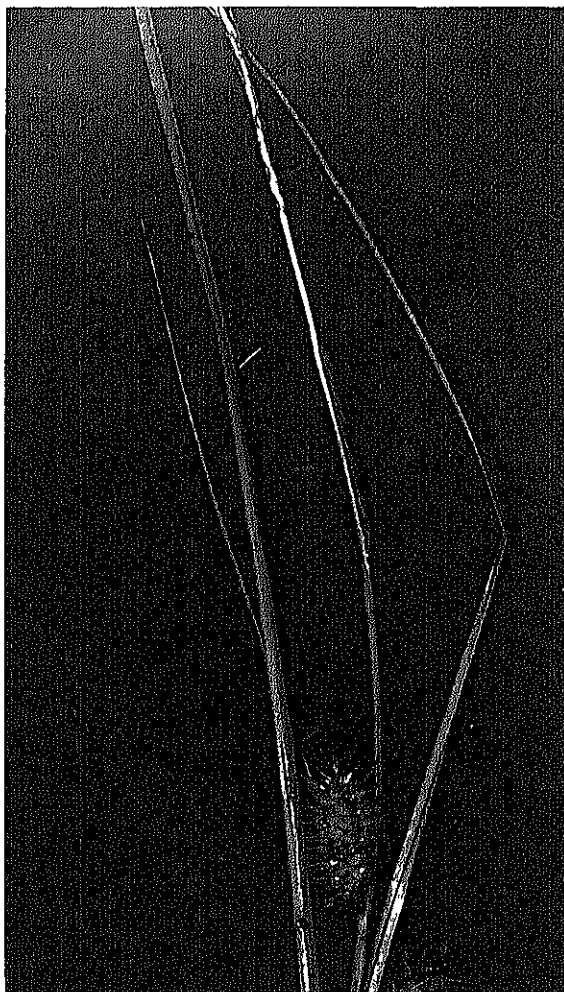
May-August

Field Marks: This sedge is distinguished by the combination of 1-4 slender male spikes, several thick, upright female spikes, 3 stigmas, triangular achenes, and long-tapering perigynia 1/4-1/3 inch long.





Local Notes:



Habitat: Marshes, wet meadows, swamps, bogs, edge of lakes and ponds, along streams.

Habit: Perennial herb with short, much branched rhizomes.

Stems: Upright, triangular, up to 3 feet tall, without hairs but sometimes rough to the touch.

Leaves: Alternate, elongated, narrow, up to 1/3 inch wide, flat, usually septate, smooth.

Flowers: Male and female borne in separate spikes; male spikes 1-4 in number, upright, up to 3 inches long, up to 1/8 inch thick, usually not subtended by bracts; female spikes 2-5 in number, upright, up to 3 inches long, up to 3/4 inch thick, each usually subtended by a leaf-like bract

Scales: Straw-colored to chestnut-colored, shorter and narrower than the perigynia, pointed at the tip but not awned.

Sepals: 0.

Petals: 0

Stamens: 3.

Pistils: Enclosed in a perigynium; perigynia crowded, all ascending, pale green to straw-colored to chestnut-colored, lanceolate to lance-ovate, long-tapering to the tip, up to 1/3 inch long, smooth, with 10-20 nerves; stigmas 3.

Fruits: Achenes triangular, up to 1/8 inch long, with the terminal style persistent and bent.

Notes: The achenes are eaten by waterfowl.

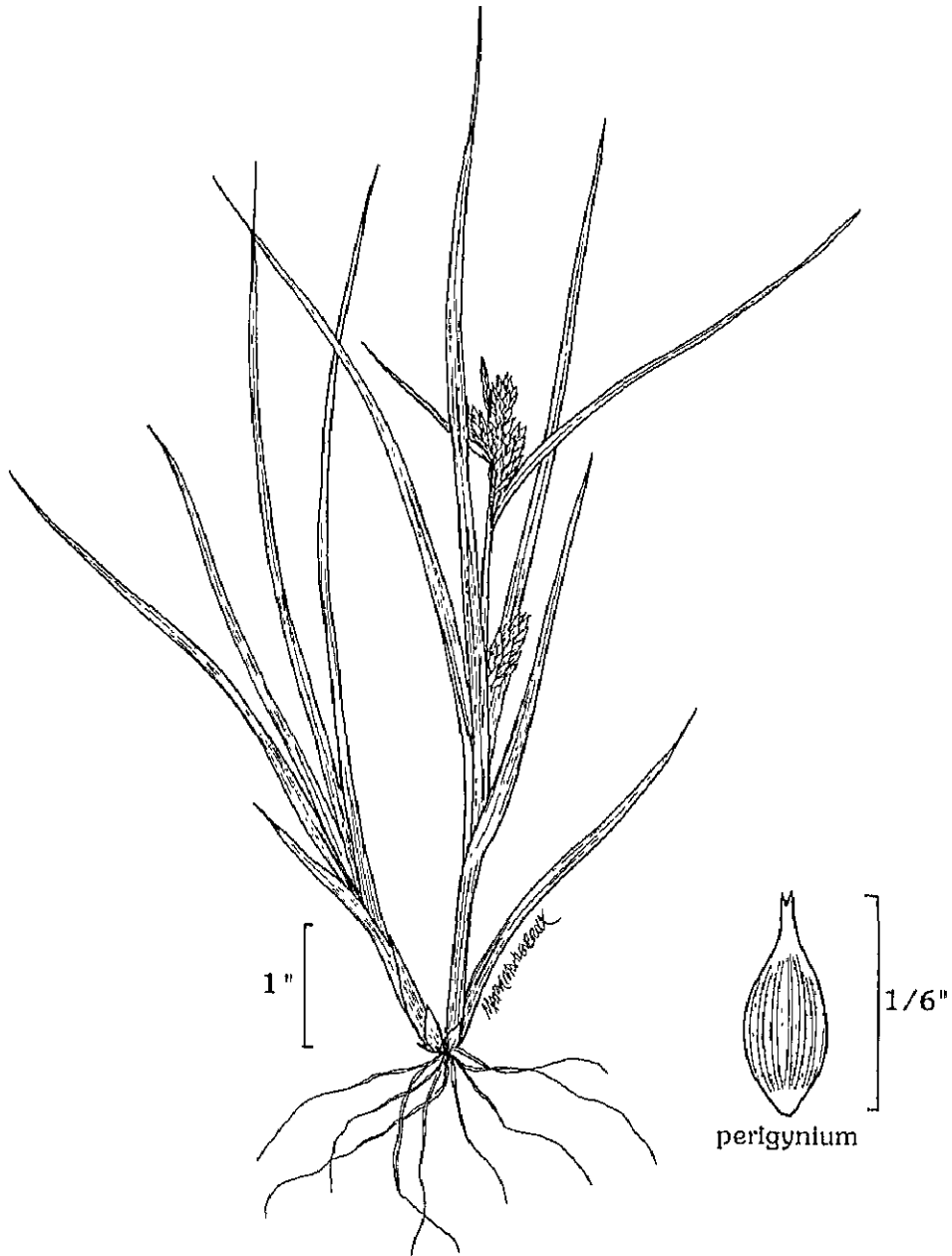
Little Green Sedge

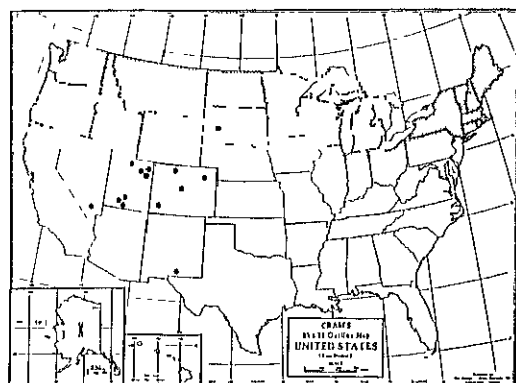
Carex viridula Michx.

Family: Sedge (Cyperaceae)

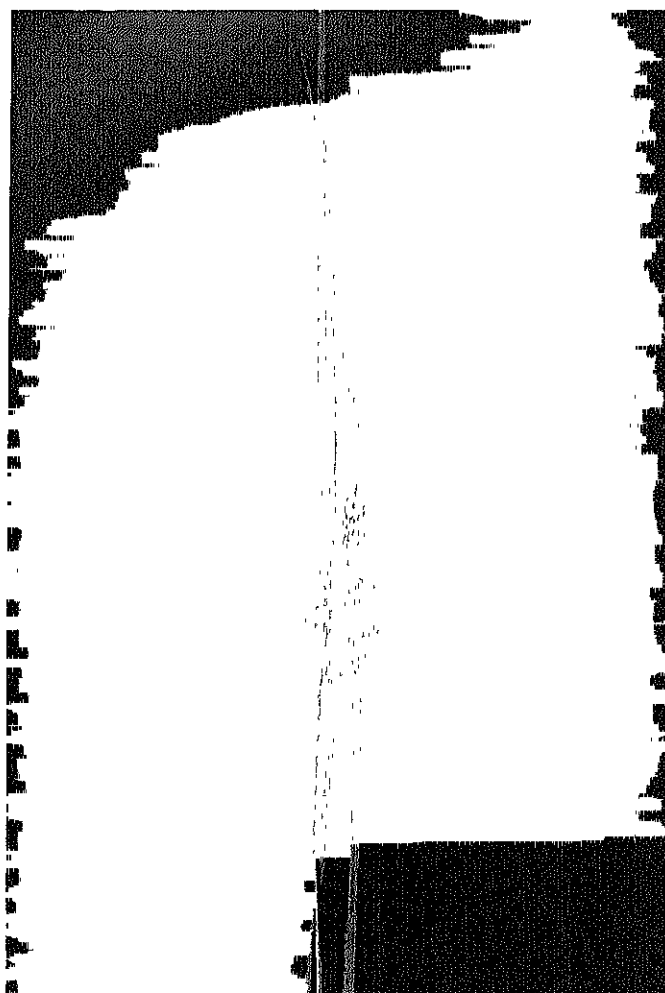
June-September

Field Marks: The distinguishing field marks of this sedge are its single terminal male spike and 2-4 female spikes, the uppermost very crowded with the inflorescence surpassed by a long, leaf-like bract. The obovoid perigynium is prominently short-beaked and pale brown to straw-colored.





Local Notes:



Habitat: Wet meadows, marshes, around ponds and lakes, even in sandy and salty areas.

Habit: Perennial herb with fibrous roots.

Stems: Upright, unbranched, up to 18 inches tall, without hairs.

Leaves: Elongated, mostly near the base of the plant, flat or channelled, up to 1/8 inch wide, without hairs.

Flowers: Male and female flowers borne in separate spikes, the male spike solitary, terminal, 1/3-1 inch long, the female spikes 2-4, 1/4-1/2 inch long; all the upper spikes sessile or nearly so, the lower spikes sometimes on short, slender stalks; at least one bract subtending the inflorescence leaf-like, much longer than the inflorescence; scales longer than the perigynia, pale brown with a green midvein and transparent margins.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Enclosed in a perigynium, each perigynium obovoid, up to 1/6 inch long, tapering to a slender beak, prominently nerved, pale brown to straw-colored; stigmas 3.

Fruits: Achenes triangular, up to 1/16 inch long, smooth.

Notes: The achenes are eaten by waterfowl.

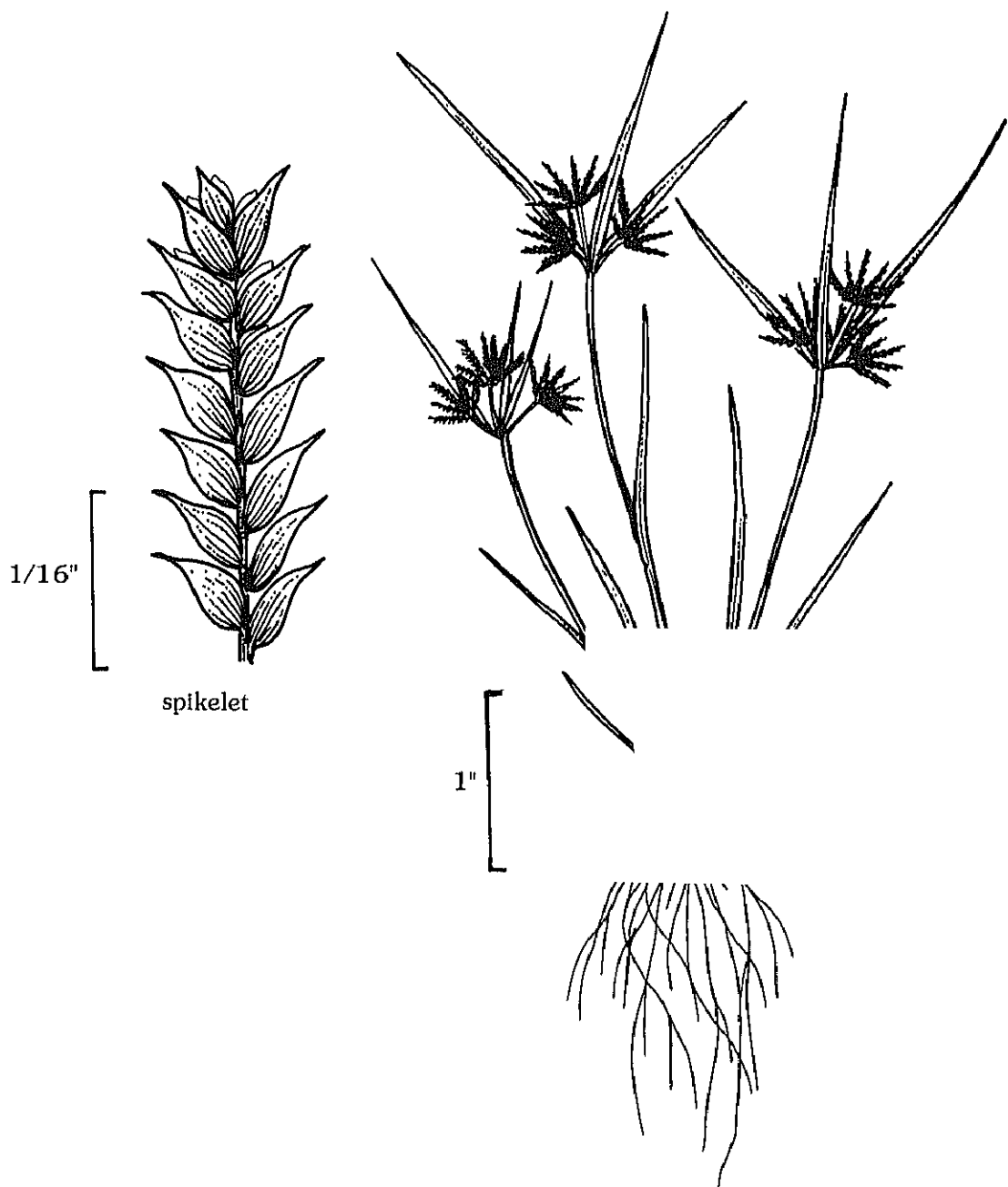
Awned Flatsedge

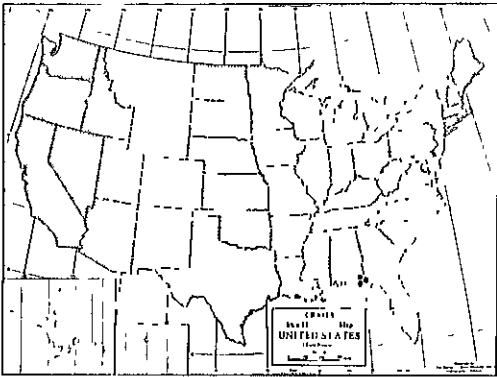
Cyperus aristatus Rottb.

Family: Sedge (Cyperaceae)

June-October

Field Marks: This flatsedge is readily distinguished by its small stature and the slender tips of the scales of the spikelet which are distinctly curved outward.





Local Notes:

Habitat: Wet areas, particularly along streams and around lakes and ponds; also in temporary water-filled depressions on sandstone bluffs.

Habit: Tufted annual with fibrous roots.

Stems: Upright, slender, up to 6 inches tall, smooth.

Leaves: Crowded near the base of the plant, elongated, very narrow, up to 1/6 inch wide, smooth

Flowers: Crowded into flat spikelets; spikelets several, crowded into densely rounded clusters, the central cluster sessile, the other clusters, if present, on stalks; bracts much surpassing the inflorescence, each spikelet flat, less than 1/2 inch long, with 8-16 flowers.

Scales: Lanceolate, awn-tipped, with the tip strongly recurved, green to pale brown.

Sepals: 0.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior; style 3-parted.

Fruits: Achenes triangular, smooth, obovoid to oblongoid, brown, about 1/20 inch long.

Notes: The plants have the odor of slippery elm, particularly when dried. The achenes are eaten by waterfowl.

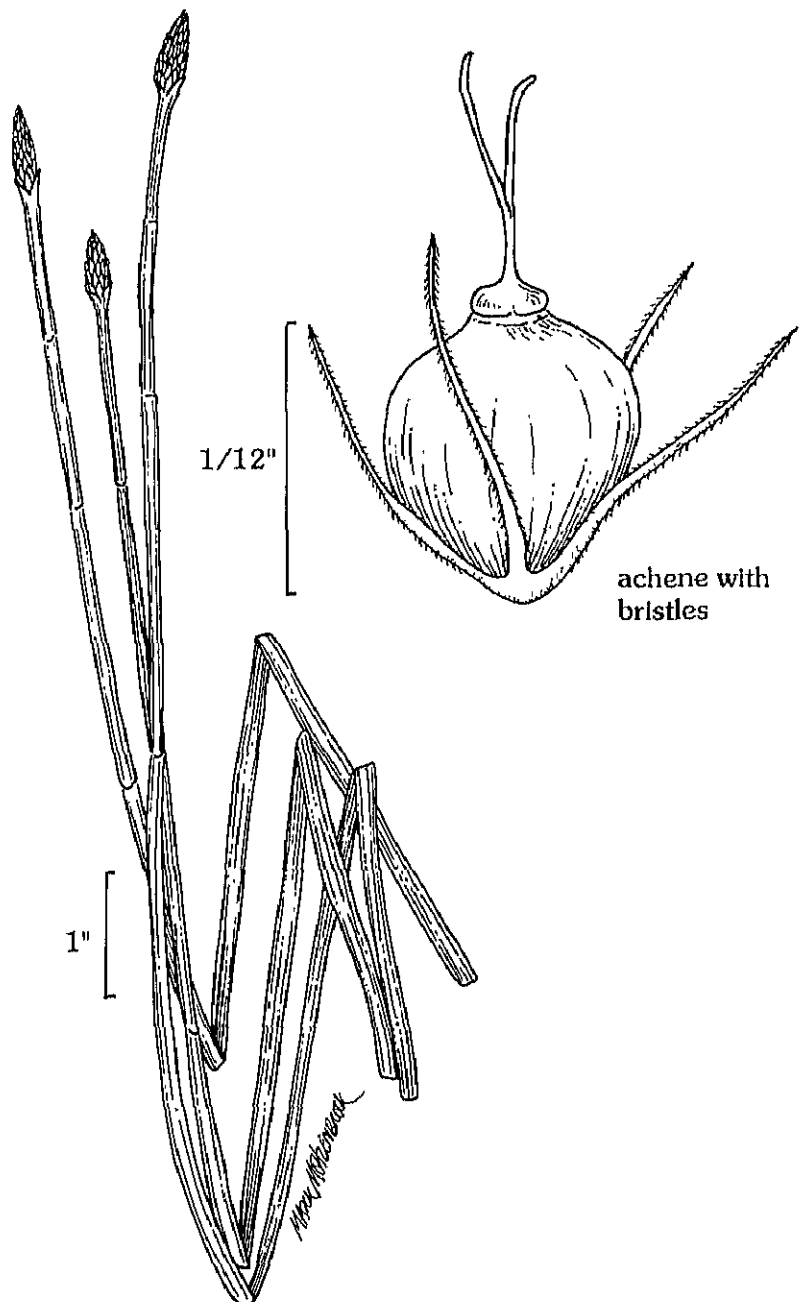
Creeping Spikerush

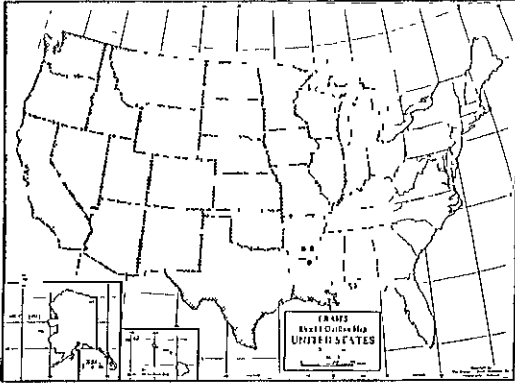
Eleocharis macrostachya Britton

Family: Sedge (Cyperaceae)

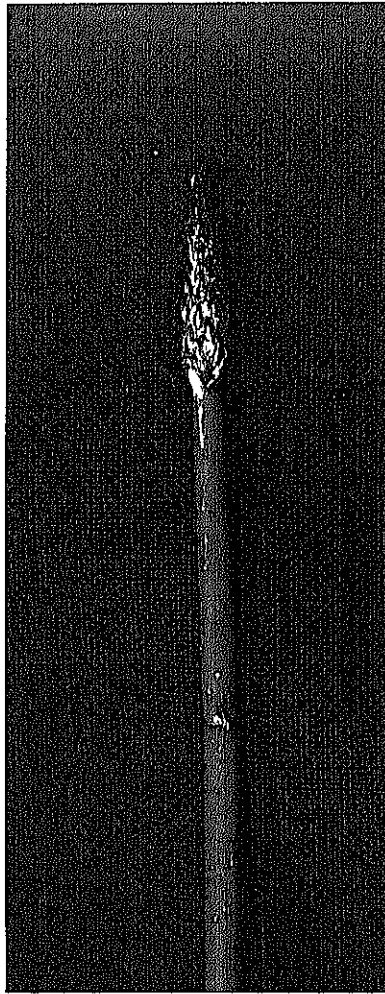
June-August

Field Marks: This spikerush may be distinguished by its rhizomes, stiff, round stems that are not thread-like, and yellow-brown achenes with a flattened tubercle.





Local Notes:



Habitat: Wet ditches, wet meadows, around lakes and ponds.

Habit: Perennial herb with branched, reddish rhizomes.

Stems: Upright, smooth, stiff, round, unbranched, to 3 1/2 feet tall.

Leaves: Reduced to sheaths.

Flowers: 1 per scale, with several scales per spikelet; spikelet one per stem, lanceoloid, up to 1 1/4 inches long, with the lowest 2-3 scales empty

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior; style 2-cleft.

Fruits: Achenes obovoid, yellow-brown, shiny, up to 1/12 inch long, with a flattened tubercle and subtended by as many as 8 bristles, or bristles sometimes absent.

Notes: This species is considered by some to be the same as *E. palustris*. The achenes are eaten by waterfowl.

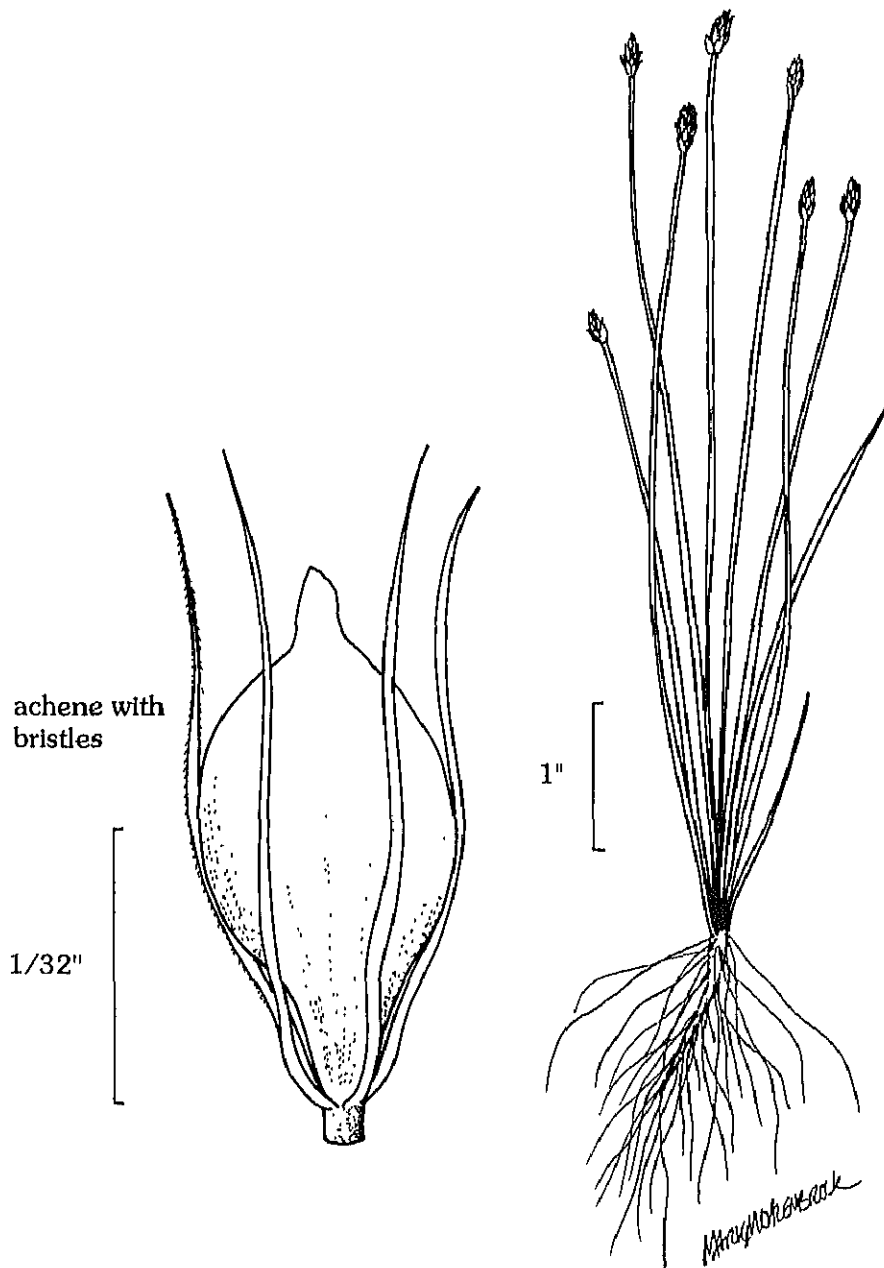
Few-flower Spikerush

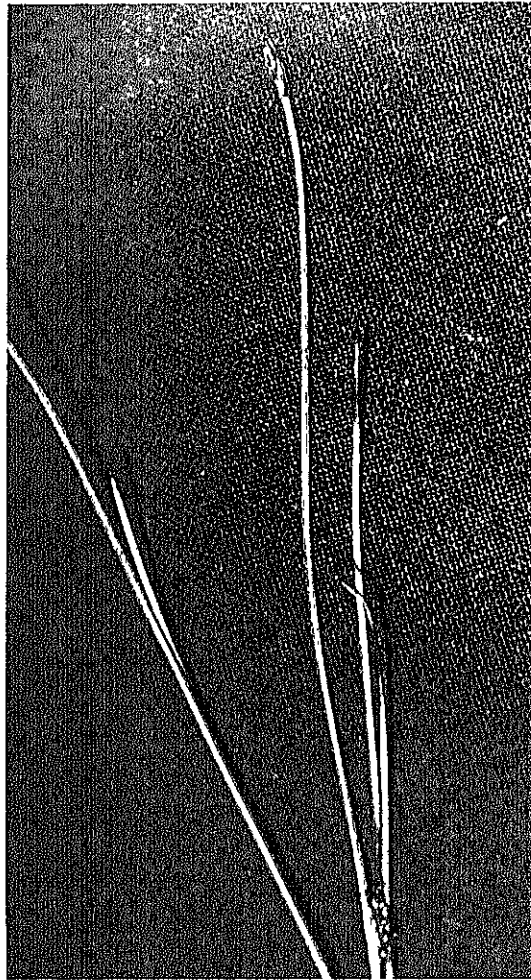
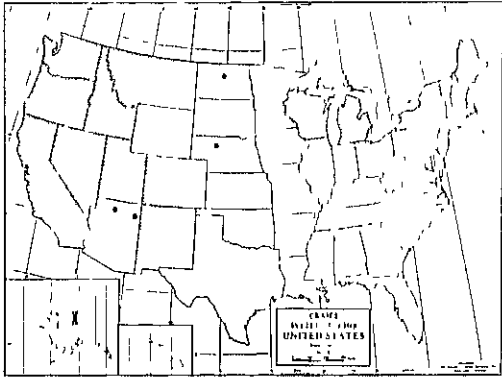
Eleocharis pauciflora (Lightf.) Link

Family: Sedge (Cyperaceae)

June-August

Field Marks: This spikerush is distinguished by its slender nearly thread-like stems bearing a small spikelet with no more than 9 flowers. The distinct beak on the achene is continuous with the body of the achene and about 1/4 as long.





Local Notes:

Habitat: Bogs, fens, wet meadows, sometimes above timberline, sometimes in salty or alkaline habitats

Habit: Dwarf perennial herb with short and thick as well as longer and more slender rhizomes

Stems: Upright, very slender, angular, up to 18 inches long, smooth

Leaves: 0.

Flowers: Borne in a solitary terminal spikelet; spikelet narrowly ovoid, pointed at the tip, up to 1/3 inch long, with up to 9 flowers

Scales: Ovate, pointed at the tip, up to 1/4 inch long, brown with pale margins.

Sepals: 0

Petals: 0.

Stamens: 3

Pistils: Ovary superior; stigmas 3

Fruits: Achenes triangular, up to 1/8 inch long, abruptly tapering to a continuous short beak about 1/4 the length of the body of the achene, without hairs

Beaked Spikerush

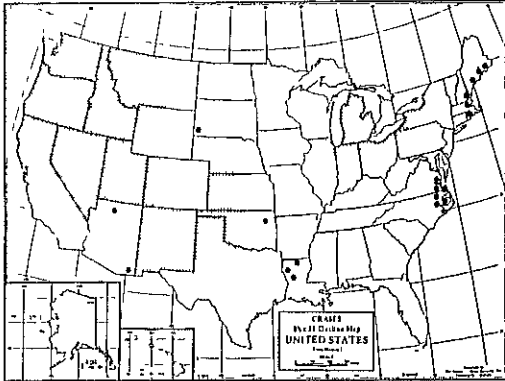
Eleocharis rostellata (Torr.) Torr.

Family: Sedge (Cyperaceae)

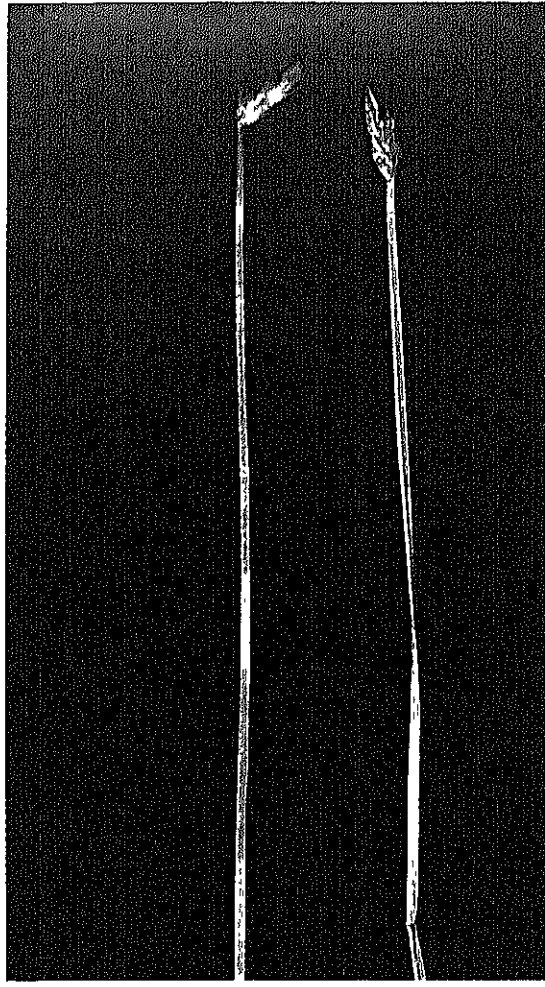
June-August

Field Marks: This spikerush is recognized by its flattened stems, its spikelets 1/3-1/2 inch long, its beaked achenes, and its empty lowest scale of the spikelets





Local Notes:



Habitat: Marshes, often in alkaline or salty areas.

Habit: Perennial herb with stout, vertical rhizomes.

Stems: Flattened, up to 3 feet tall, bearing a single spikelet and no leaves.

Leaves: 0.

Flowers: 5-25 in a spikelet, the spikelet 1/3-1/2 inch long; scales with a pale border and central area, the lowest one empty.

Sepals: 0

Petals: 0.

Stamens: 3.

Pistils: Ovary superior; stigmas 3.

Fruits: Achenes more or less triangular, tapering to an elongated beak, light green to pale brown, 1/10-1/8 inch long, subtended by a few bristles usually longer than the achenes.

Notes: The achenes are eaten by waterfowl.

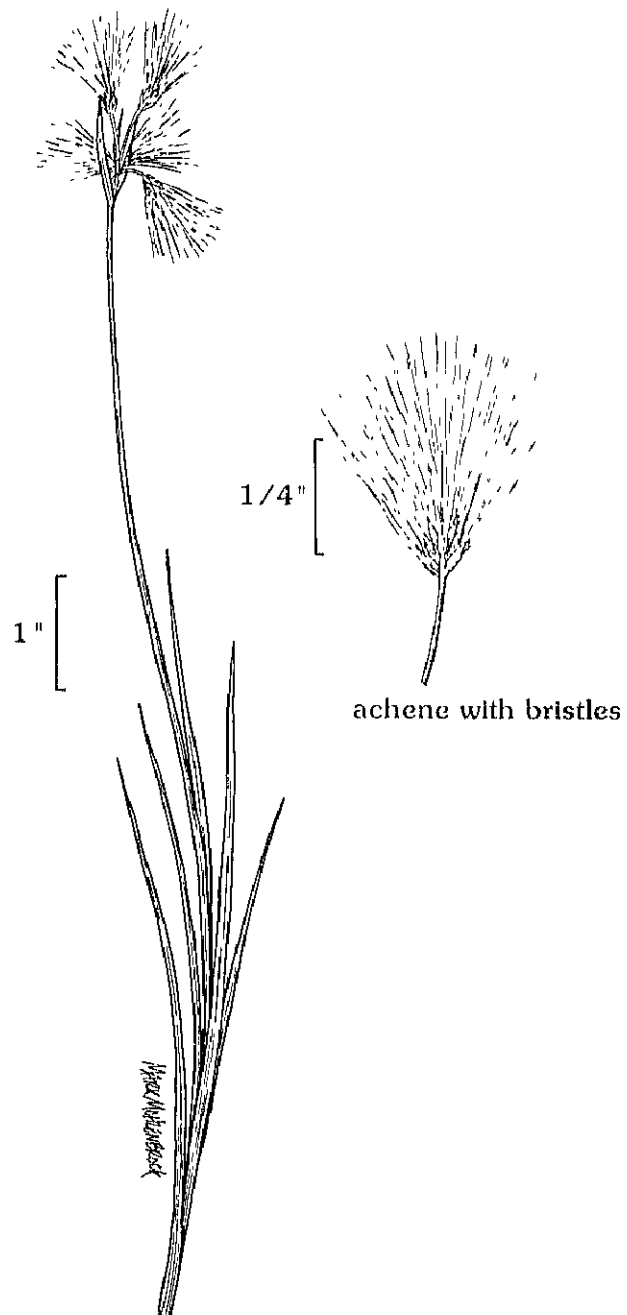
Slender Cotton-grass

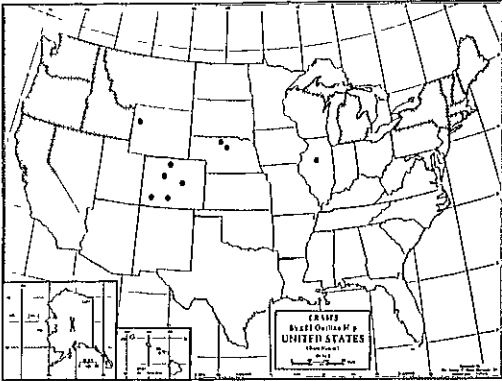
Eriophorum gracile W. Koch

Family: Sedge (Cyperaceae)

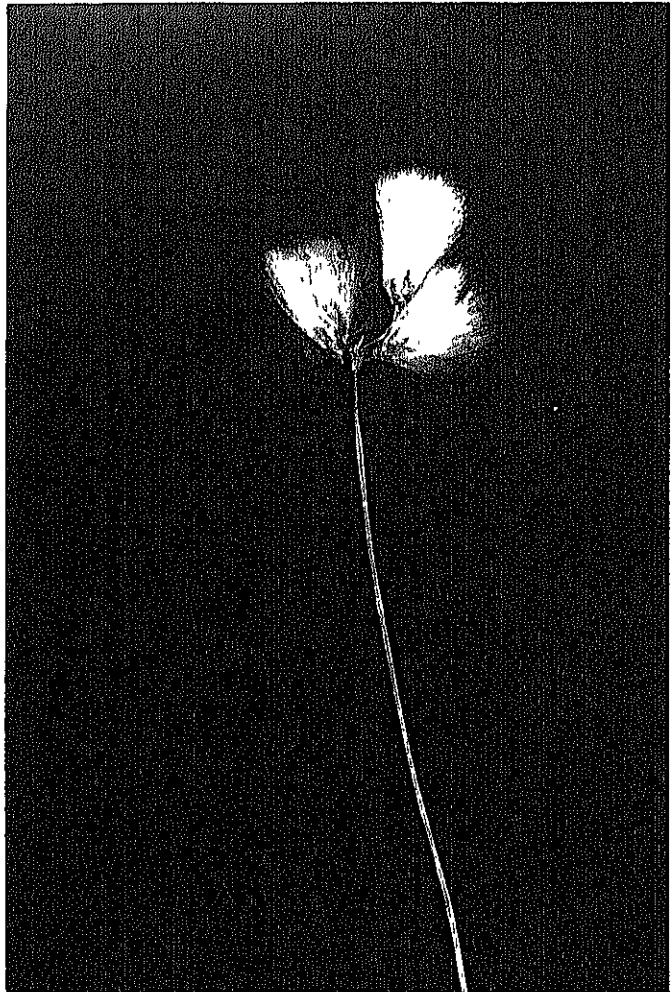
July-August

Field Marks: This cotton-grass differs from others by its channelled, triangular leaves and several spikelets on each stem.





Local Notes:



Habitat: Bogs.

Habit: Perennial herb with thickened rootstocks.

Stems: Upright or sometimes bent over, unbranched, up to 1 3/4 feet tall, smooth, not triangular.

Leaves: Very narrow, elongated, alternate, triangular, channelled, up to 1 1/2 inches long, smooth, the basal leaves usually absent at flowering time.

Flowers: Crowded together into 2-4 terminal spikelets, each spikelet up to 1 inch long, on a hairy stalk; all spikelets subtended by a bract up to 1/2 inch long; scales ovate, gray to black, pointed at the tip.

Sepals: 0.

Petals: 0.

Stamens: Usually 3.

Pistils: Ovary superior; styles 3-parted.

Fruits: Achenes triangular, obovoid to oblongoid, about 1/10 inch long, subtended by bright white bristles up to 1 inch long.

Notes: The achenes, which are wind dispersed because of the bright white bristles, are eaten by waterfowl.

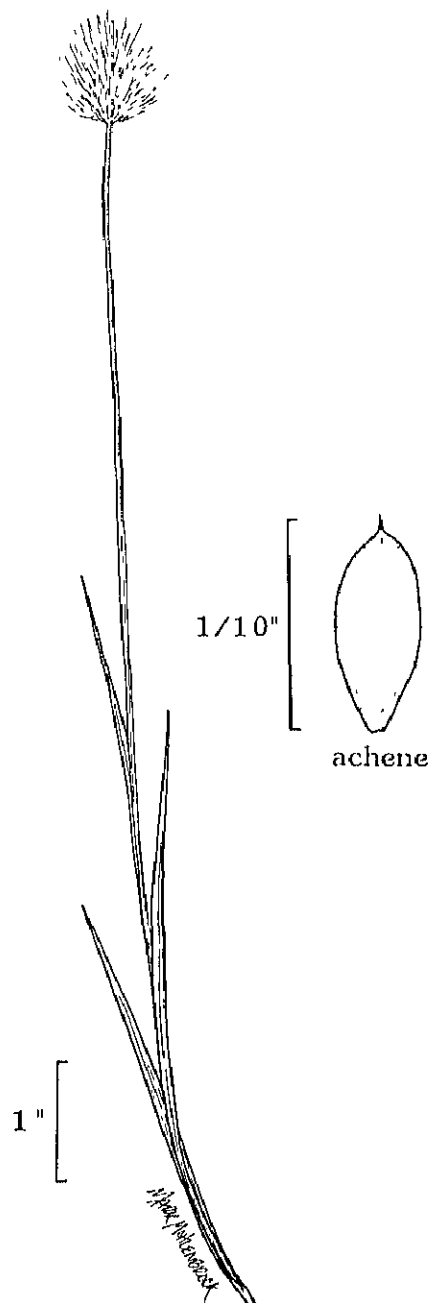
Scheuchzer's Cotton-grass

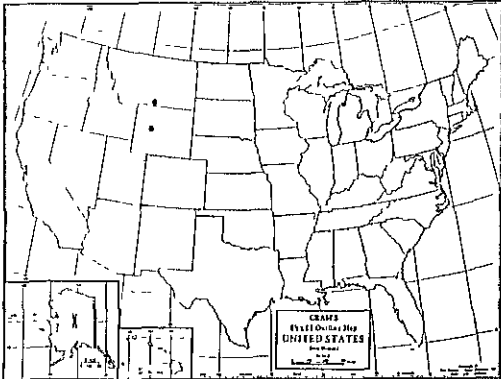
Eriophorum scheuchzeri Hoppe

Family: Sedge (Cyperaceae)

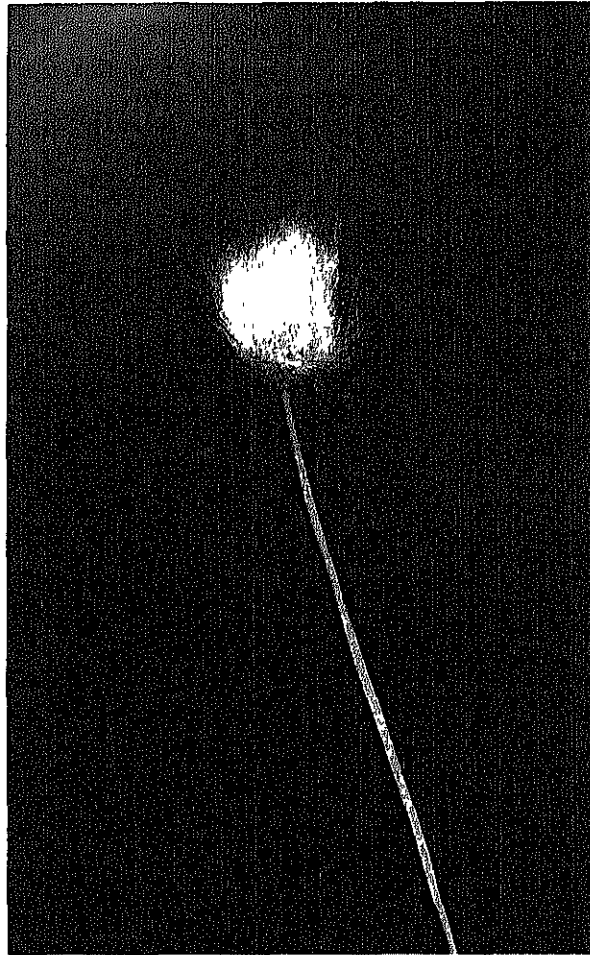
July-August

Field Marks: The field marks of this cotton-grass are its short stature, its single spikelet at the tip of the stem, its blackish green scales, and its white bristles that subtend the achene.





Local Notes:



Habitat: Bogs, fens.

Habit: Perennial herb with creeping rhizomes, often forming dense colonies.

Stems: Upright, unbranched, up to 8 inches tall, smooth.

Leaves: Very few, mostly near the base of the plant, channelled and triangular, smooth, only about 1/20 inch wide.

Flowers: Crowded together into a single terminal spikelet, up to 1 inch long; scales narrowly lanceolate, usually blackish green, tapering to a slender point.

Sepals: 0.

Petals: 0.

Stamens: Usually 3.

Pistils: Ovary superior; styles 3-parted.

Fruits: Achenes triangular, oblanceoloid, about 1/10 inch long, subtended by white bristles.

Notes: The achenes may be eaten by waterfowl.

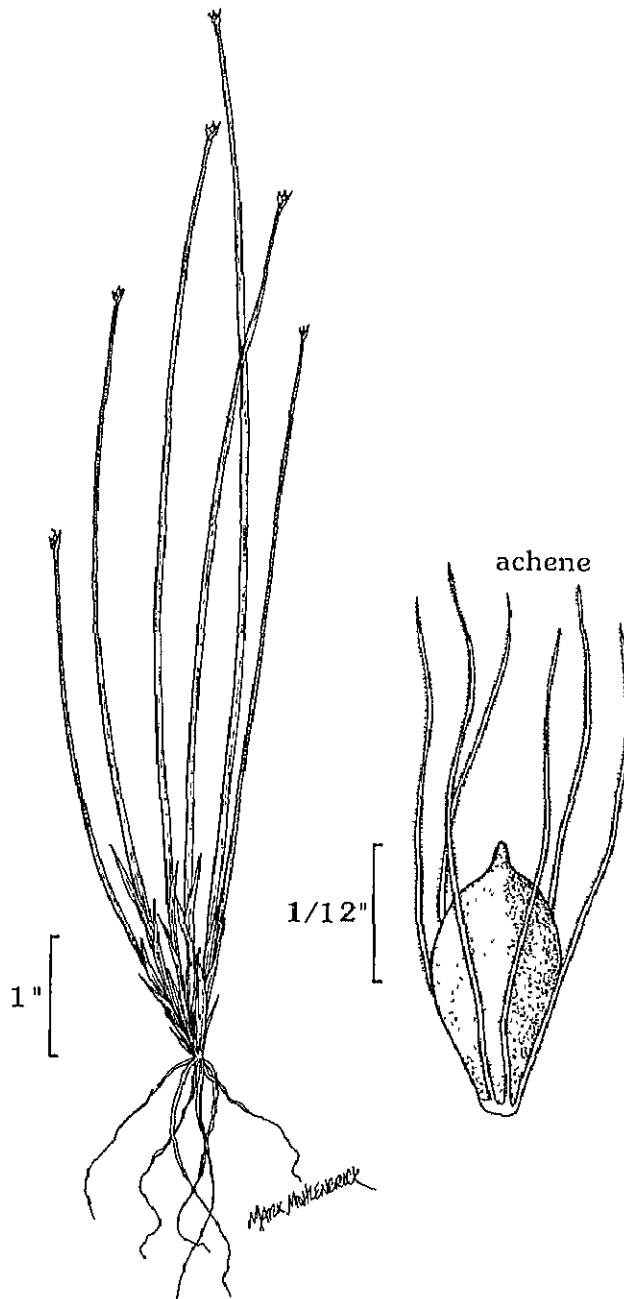
Tufted Bulrush
Scirpus cespitosus L.

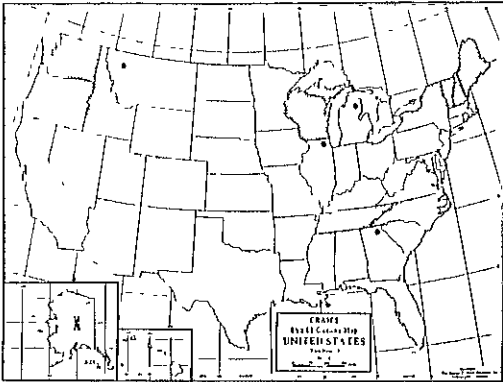
Scirpus cespitosus L.

Family: Sedge (Cyperaceae)

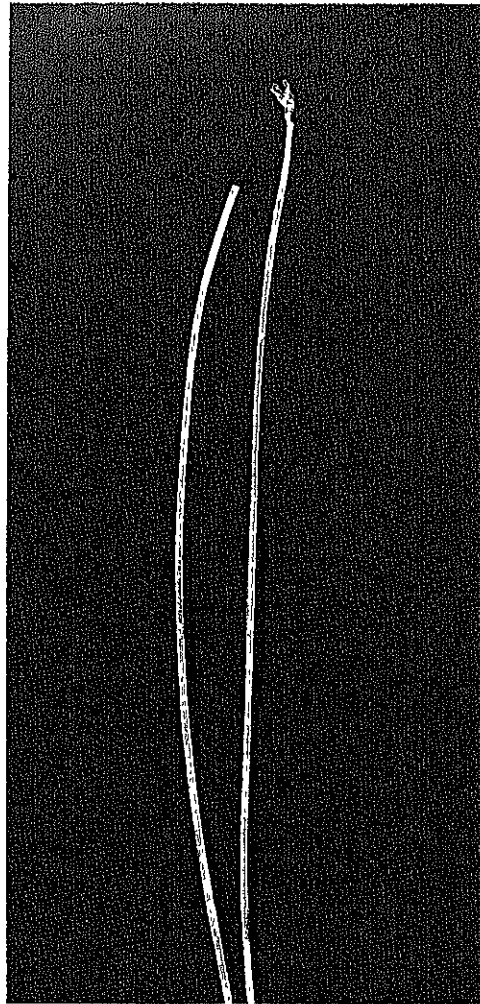
July-August

Field Marks: This small bulrush has a small, solitary, terminal spikelet and a single green leaf that is a short distance above the straw-colored scale leaves at the base of the plant.





Local Notes:



Habitat: Marshes, bogs

Habit: Perennial herb with a short rhizome and fibrous roots.

Stems: Upright, round, not triangular, pale green, up to 1 1/4 feet tall, smooth.

Leaves: Mostly scale-like and straw-colored at the base of the plant; a single green leaf usually a short distance above the scale leaves, up to 1/4 inch long, smooth.

Flowers: Very few in a solitary, terminal spikelet, spikelet ovoid to oblongoid, up to 1/4 inch long, subtended by a linear bract up to 1/4 inch long; scales ovate, yellow-brown.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior, smooth; styles 3-cleft.

Fruits: Achenes oblongoid, pointed at the tip, triangular, brown, up to 1/6 inch long, smooth.

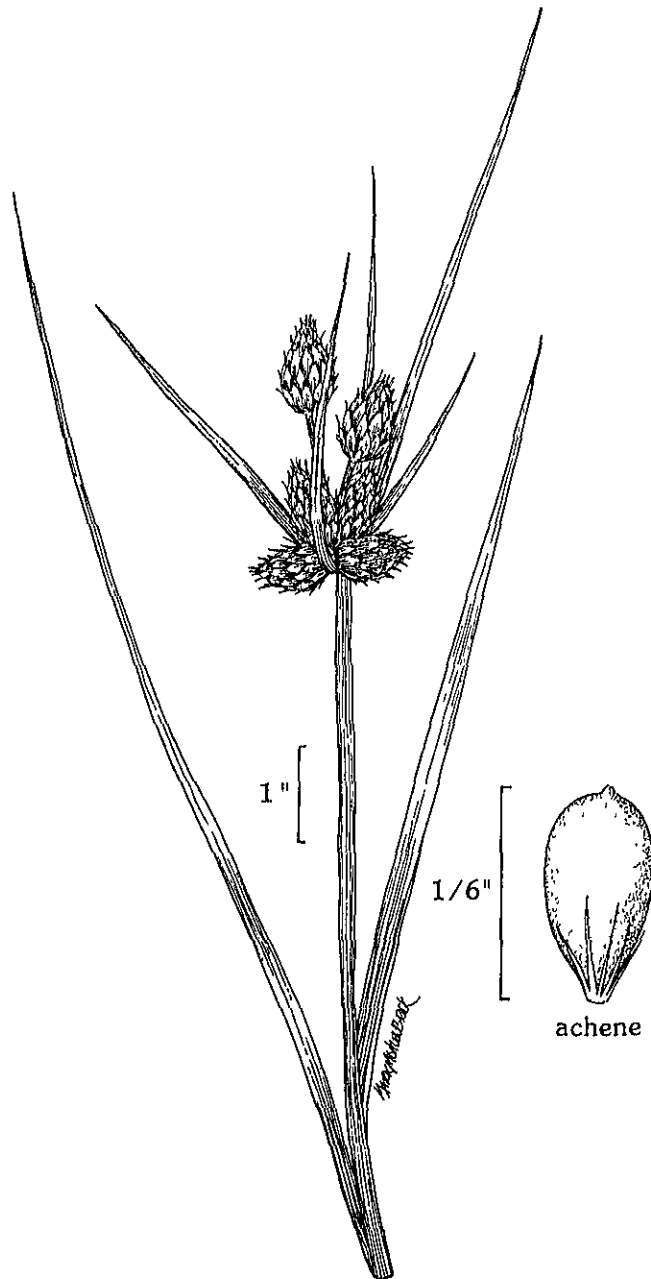
Saltmarsh Bulrush

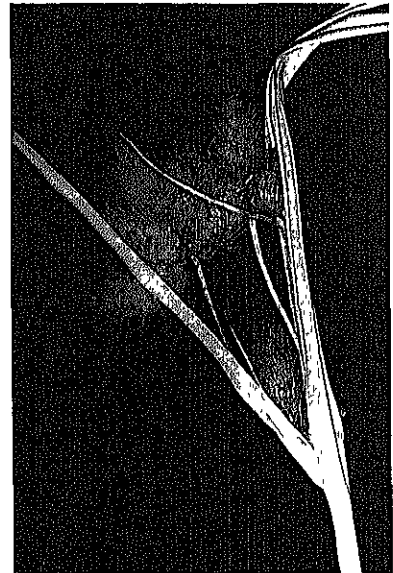
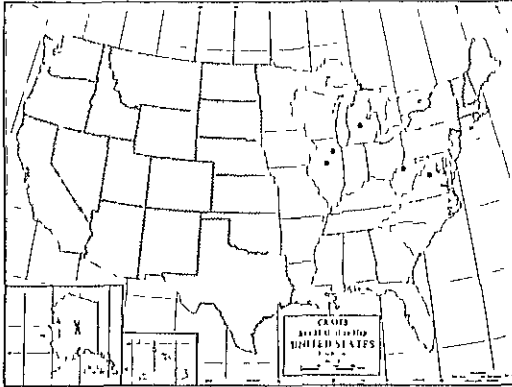
Scirpus maritimus L.

Family: Sedge (Cyperaceae)

June-September

Field Marks: This bulrush is distinguished by its stout growth form and its large spikelets densely crowded in an usually sessile cluster at the tip of the stem.





Local Notes:

Habitat: Wet meadows, marshes, around ponds, particularly in alkaline habitats.

Habit: Stout perennial with rhizomes and tubers.

Stems: Upright, triangular, usually unbranched, up to 5 feet tall, without hairs.

Leaves: Alternate, elongated, flat, up to 1/2 inch wide, without hairs.

Flowers: Several crowded into spikelets, usually the sessile spikelets densely clustered at the tip of the stem; spikelets rounded at the tip, up to 1 inch long, up to 1/2 inch thick, subtended by 2-4 leaf-like bracts of different lengths; scales usually pale brown, minutely hairy, notched at the tip with a short awn arising from the notch.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior; styles 2.

Fruits: Achenes lenticular, up to 1/6 inch long, with a minute point at the tip and with a few short bristles at the base.

Notes: The large achenes are eaten by waterfowl.

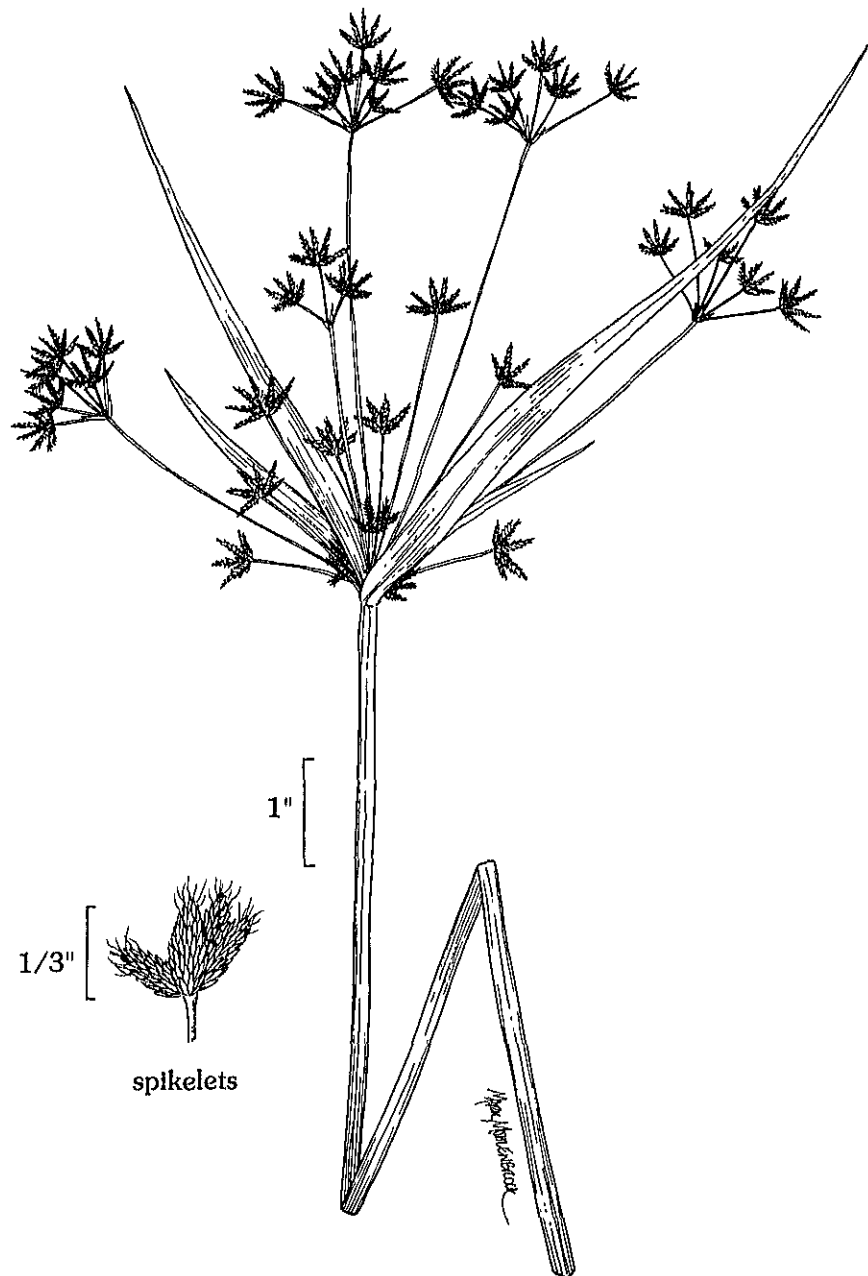
Small-fruit Bulrush

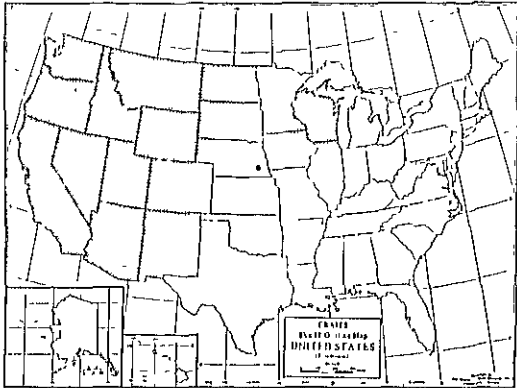
Scirpus microcarpus J. & K. Presl

Family: Sedge (Cyperaceae)

June-August

Field Marks: The flower clusters are subtended by several leaf-like bracts that are unequal in size, spikelets 1/6-1/3 inch long and arranged in clusters, and scales that lack an awned tip.





Local Notes:



Habitat: Along streams, wet ditches, marshes.

Habit: Perennial herb with long, stout rhizomes.

Stems: Upright, triangular, stout, smooth, up to 5 feet tall

Leaves: Several, alternate, elongated, narrow, usually rough along the edges, up to 3/4 inch wide; sheaths tinged with red or purple.

Flowers: Borne in spikelets, with several spikelets in clusters, some of the clusters sometimes sessile, others on long stalks, subtended by several leafy bracts of different lengths; each spikelet 1/6-1/3 inch long.

Scales: Ovate, pointed but not awned at the tip, black or greenish black, bristles 4-6.

Sepals: 0.

Petals: 0.

Stamens: 3.

Pistils: Ovary superior; style 2-cleft.

Fruits: Achenes pale, lenticular, smooth, 1/16-1/20 inch long.

Notes: The achenes are eaten by waterfowl.

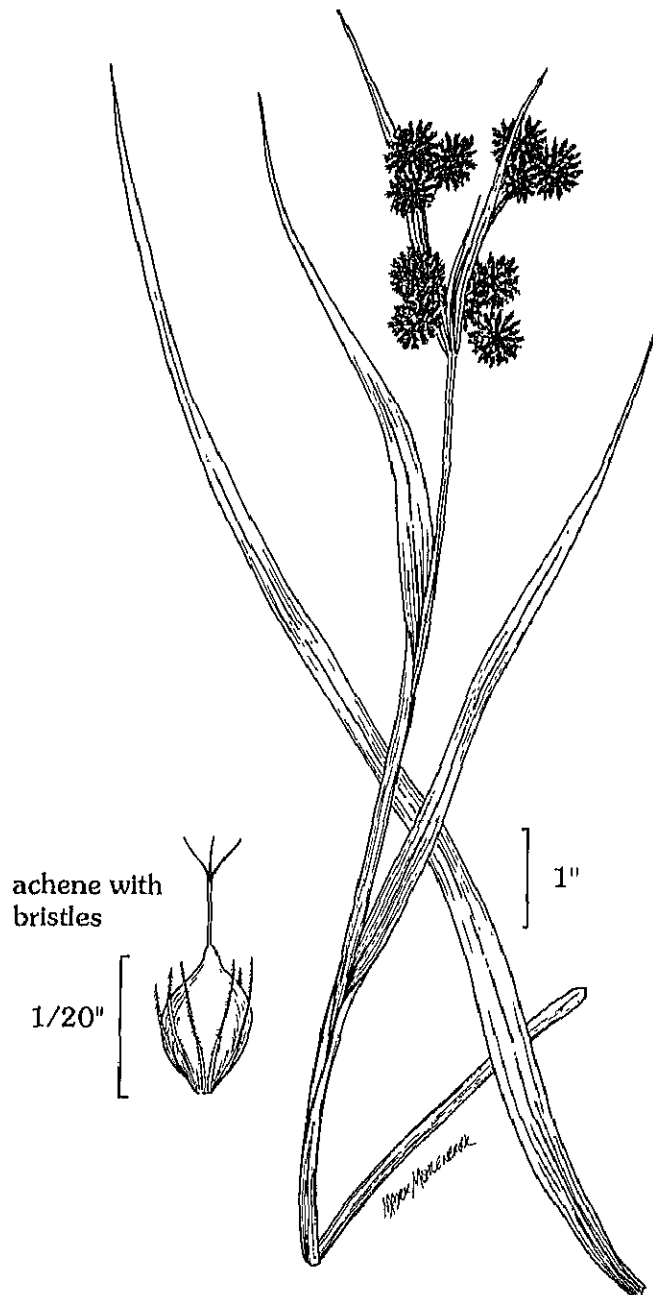
Cloaked Bulrush

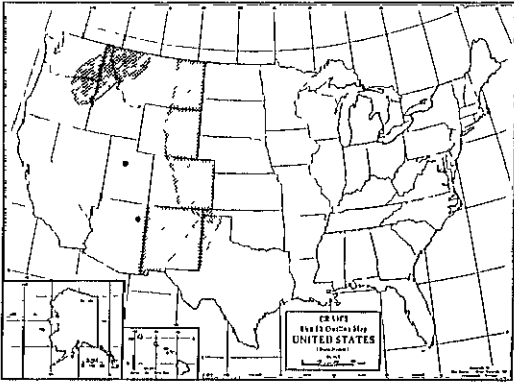
Scirpus pallidus (Britton) Fernald

Family: Sedge (Cyperaceae)

June-August

Field Marks: The flower clusters are subtended by several leaf-like bracts that are unequal in size, by spikelets not more than 1/6 inch long and arranged in clusters, and by awn-tipped scales in the spikelets.





Local Notes:

Three-square Bulrush

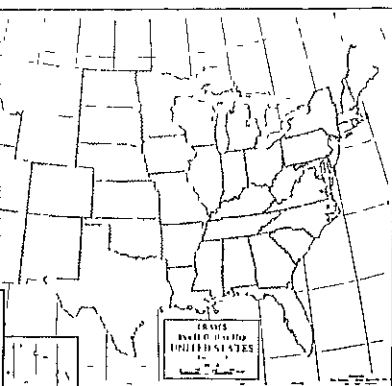
Scirpus pungens Vahl

Family: Sedge (Cyperaceae)

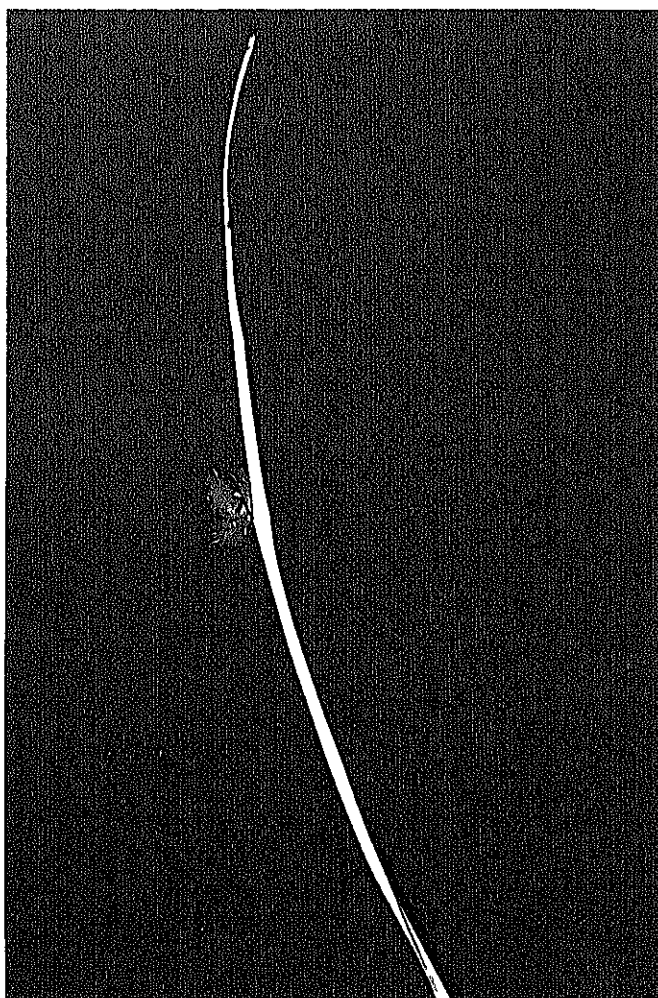
May-August

Field Marks: This bulrush is distinguished by the cluster of sessile spikelets subtended by a single upright bract that appears like an extension of the stem. The stems are only slightly triangular and the achenes are 1/10-1/8 inch long.





Notes:



Habitat: Wet meadows, marshes, around lakes and ponds.

Life: Perennial herb with rhizomes.

Stems: Upright, somewhat triangular, up to 3 feet tall, without hairs.

Leaves: Mostly arising near the base of the plant, elongated, flat or sometimes folded, up to 1/2 inch wide, without hairs.

Flowers: Borne in 1-6 spikelets, the spikelets sessile and subtended by an upright bract that appears like an extension of the stem; spikelets 1/2-1 inch long, more or less pointed at the tip; bracts up to 6 inches long; scales brown, usually with a short awn at the notched tip.

Stamens: 0.

Pistils: 0

Stamens: 3.

Pistils: Ovary superior; styles 2 or 3.

Fruit: Achenes lenticular or triangular, up to 1/8 inch long, with a distinct point at the tip; with 4-6 bristles arising at the base.

Remarks: This species sometimes grows in alkaline habitats. For many years this species has been known as *S. americanus*, while the real *S. americanus* has been called *S. olneyi*. The achenes are an important food source for waterfowl.

GROUP 4

Other Monocots

GROUP 4

Other Monocots

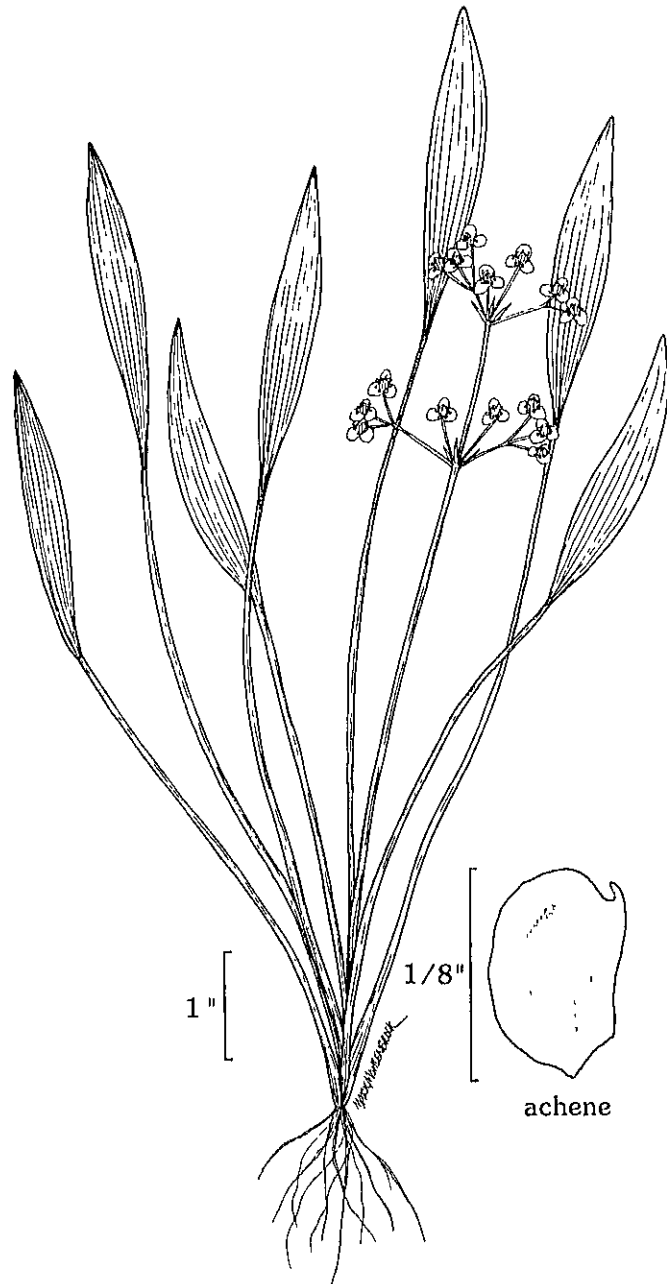
Narrow-leaf Water-plantain

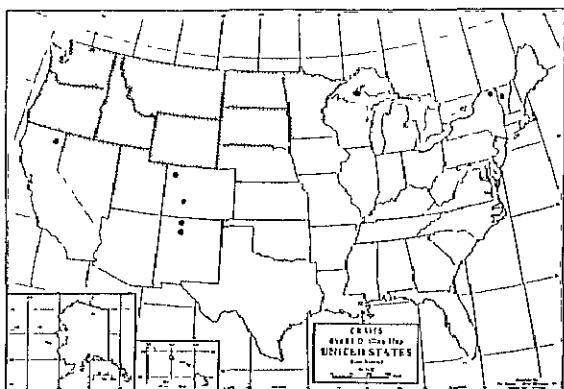
Alisma gramineum Lej.

Family: Water-plantain (Alismataceae)

June-September

Field Marks: Species of *Alisma* have 3 small white or pinkish petals, 3 sepals, and a ring of as many as 25 pistils and achenes in a single whorl. This species differs from others in the genus by its linear to elliptic leaves never more than 1 1/2 inches wide and a curved beak on the achene.





Local Notes:



Habitat: Marshes, mud flats, sometimes submerged in water.

Habit: Perennial herb with fleshy rhizomes.

Stems: Only the flower-bearing stem above ground, upright, up to 1 1/2 feet tall, smooth.

Leaves: All basal, linear to elliptic to lanceolate, up to 8 inches long, up to 1 1/2 inches wide, pointed at the tip, smooth; leaf stalks slender, smooth.

Flowers: Several in whorls forming a panicle, the panicle up to 1 1/2 feet long; flower stalks slender, up to 1 1/2 inches long, subtended by papery bracts.

Sepals: 3, free from each other, green, up to 1/8 inch long.

Petals: 3, free from each other, pinkish, up to 1/6 inch long.

Stamens: 6-9, about as long as the pistils.

Pistils: Up to 20 arranged in a single whorl, each with a superior ovary.

Fruits: Achenes up to 20 in a single whorl, each achene up to 1/8 inch long, with a short, curved beak at the tip.

Notes: The leaf shape is variable in this species. The plants may be submerged in water or rooted in mud. The achenes are eaten by waterfowl.

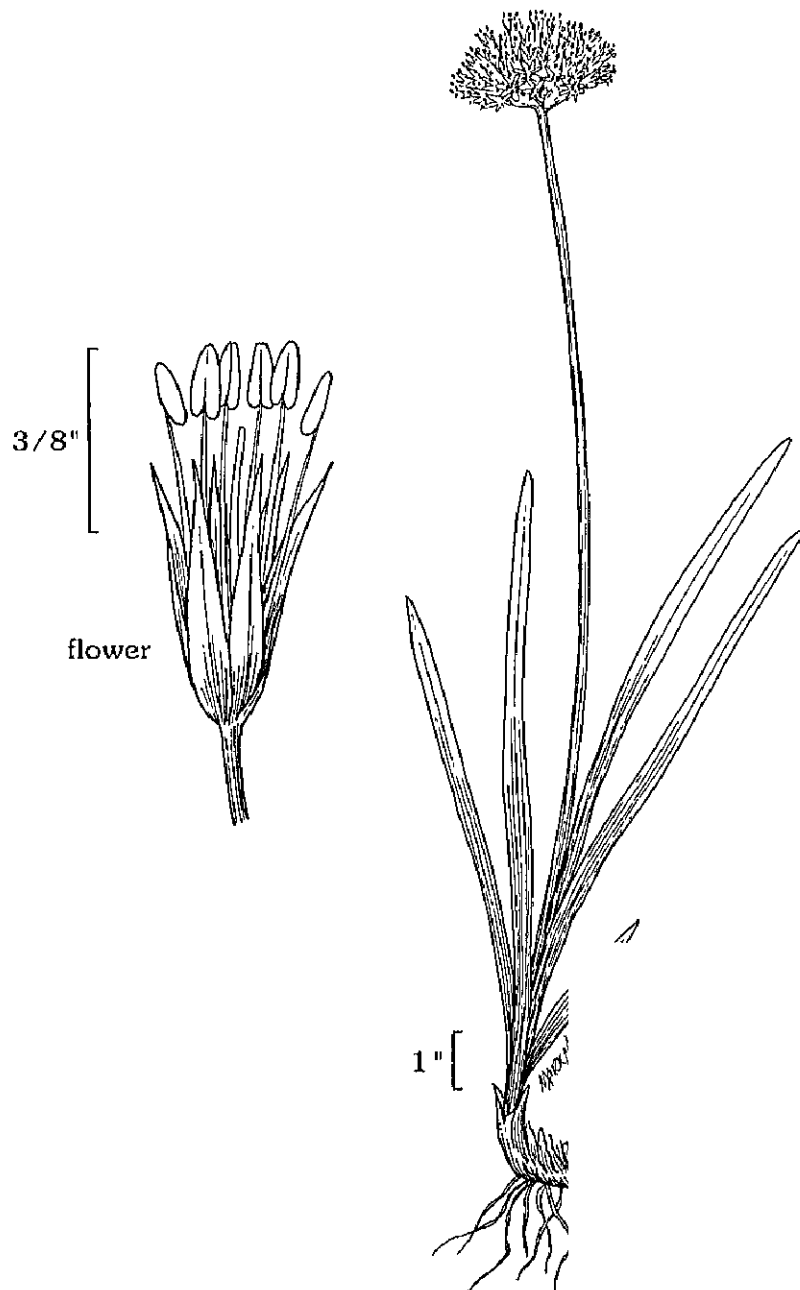
Tall Swamp Onion

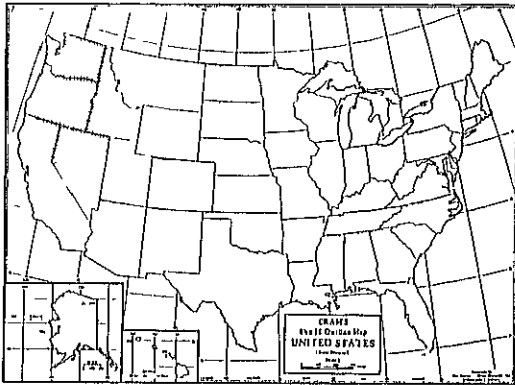
Allium validum S. Wats.

Family: Lily (Liliaceae)

June-September

Field Marks: This onion is stout, growing to a height of 3 feet. There are several bulbs formed along a rhizome. The six stamens are exserted above the sepals and petals.





Local Notes:



Habitat: Wet meadows.

Habit: Perennial herb with several oblongoid to ovoid bulbs formed along a rhizome.

Stems: Upright, stout, somewhat flattened, up to 3 feet tall, smooth.

Leaves: Several, basal, flat, elongated, up to 1/2 inch wide, rounded or barely pointed at the tip.

Flowers: 15-30 in a terminal umbel, each flower on a slender stalk 1/2-3/4 inch long.

Sepals and Petals: 6, similar, free from each other, pink, narrowly lanceolate, up to 1/2 inch long, pointed at the tip.

Stamens: 6, exserted above the sepals and petals.

Pistils: Ovary superior.

Fruits: Capsules nearly spherical, 1/4-1/3 inch in diameter, with several long, slender, not shiny seeds.

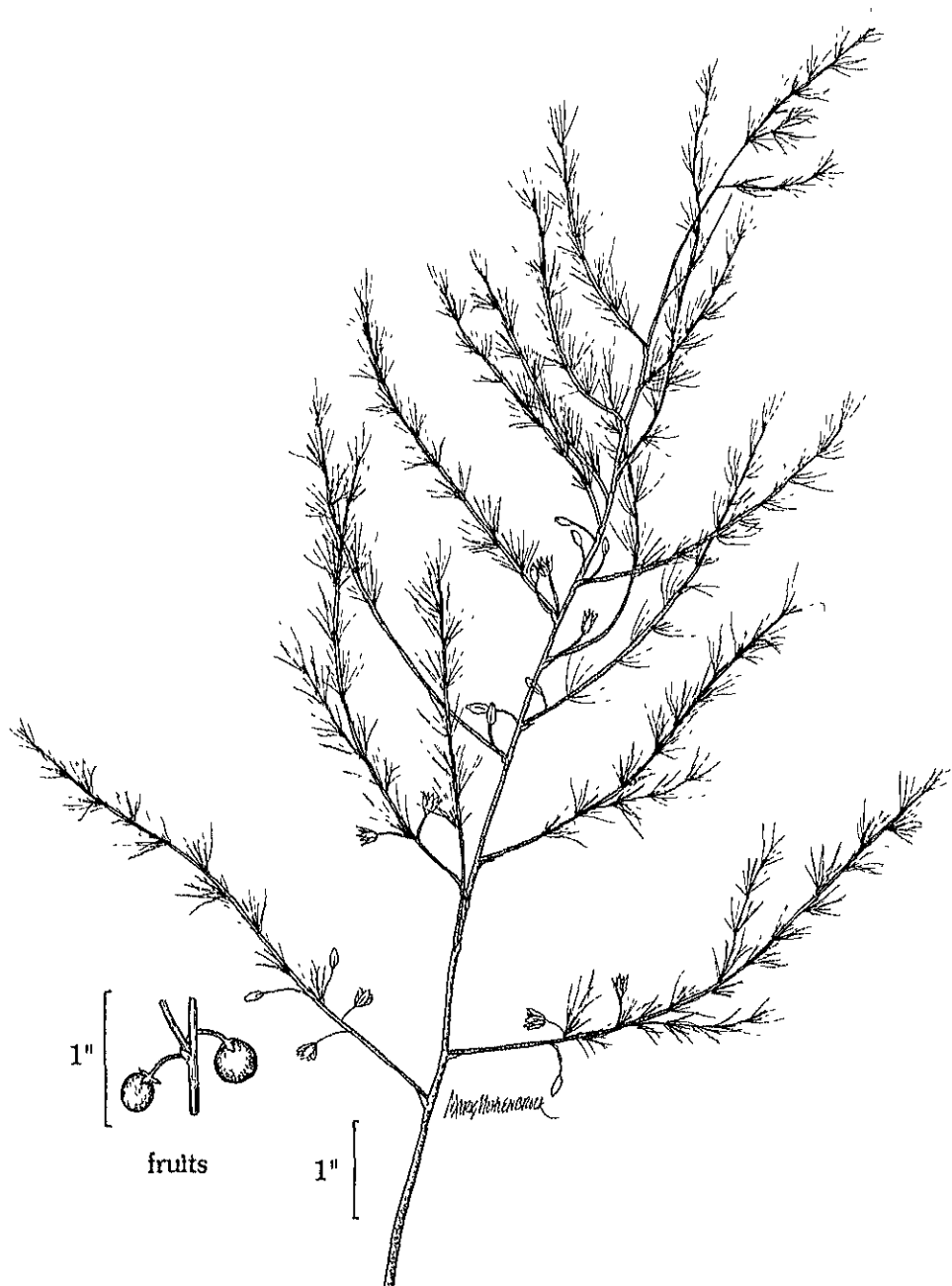
Garden Asparagus-fern

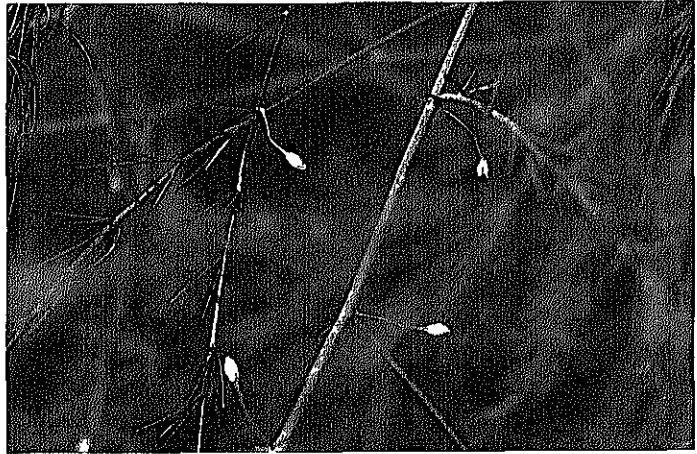
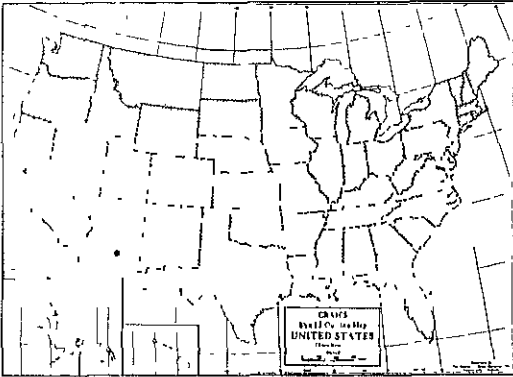
Asparagus officinalis L.

Family: Lily (Liliaceae)

July-August

Field Marks: This escape from gardens is easily recognized by its clustered thread-like branches that resemble small, needle-like leaves.





Local Notes:

Habitat: Disturbed areas, particularly along drainages.

Habit: Perennial herb with densely crowded, somewhat fleshy rhizomes.

Stems: Upright, unbranched at first but becoming branched, up to 7 1/2 feet tall, smooth.

Leaves: All reduced to scales, the scales up to 1/4 inch long on the unbranched stems, up to 1/8 inch long on the branched stems; thread-like "leaves" are actually reduced branches up to 1 inch long.

Flowers: Borne singly in the axils of the thread-like branches, on slender, drooping stalks up to 1 inch long, each flower bell-shaped.

Sepals and Petals: 6, all alike, divided nearly all the way to the base, up to 1/3 inch long.

Stamens: 6, each attached to the base of the sepals and petals.

Pistils: Ovary superior; stigmas 3.

Fruits: Berries spherical, up to 1/3 inch in diameter, red.

Notes: This species is not a fern, despite the common name. This is the same plant that is eaten as a garden vegetable.

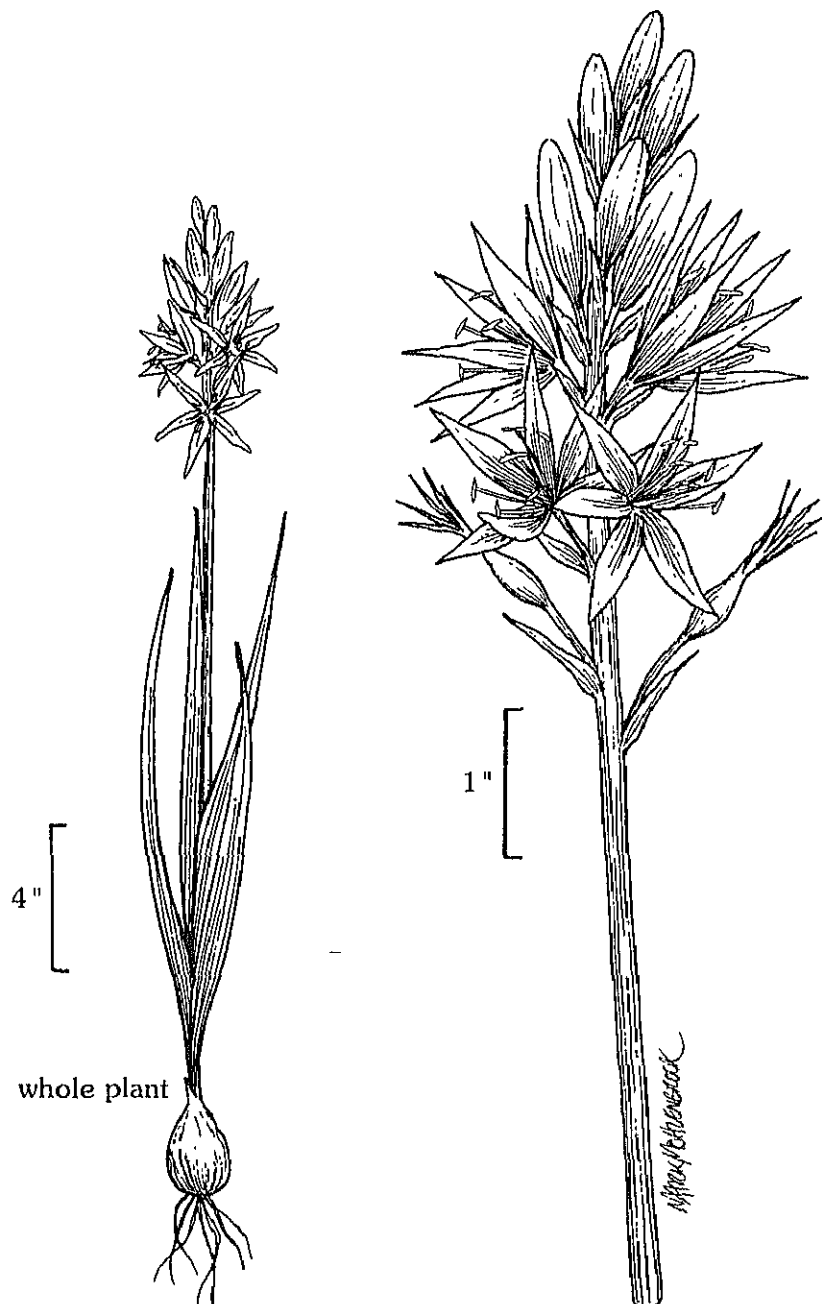
Common Camassia

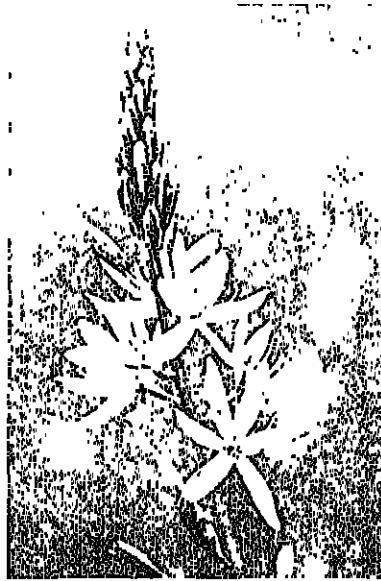
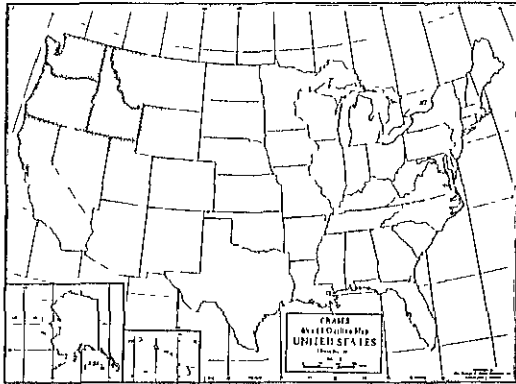
Camassia quamash (Pursh) Greene

Family: Lily (Liliaceae)

April-July

Field Marks: This showy species has a terminal raceme of blue flowers up to 3 inches across borne on a leafless stem. One of the six sepals and petals curves downward, while the other five curve upward.





Local Notes:

Habitat: Wet meadows, damp hillsides.

Habit: Perennial herb with a bulb.

Stems: Upright, smooth, up to 2 feet tall, bearing only flowers.

Leaves: All basal, flat, elongated, up to 18 inches long, up to 1 inch wide.

Flowers: Several in a terminal raceme up to 10 inches long, each flower up to 3 inches across, on stalks 1/3-1 inch long.

Sepals and Petals: 6, all similar in size and shape, free from each other, blue, narrowly lanceolate, up to 1 1/2 inches long, one of them curving downward, the other 5 curving upward.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Capsules ovoid, up to 1 inch long, pale brown to brown.

Notes: The sepals and petals become twisted over the capsules.

Small Yellow Lady's-slipper

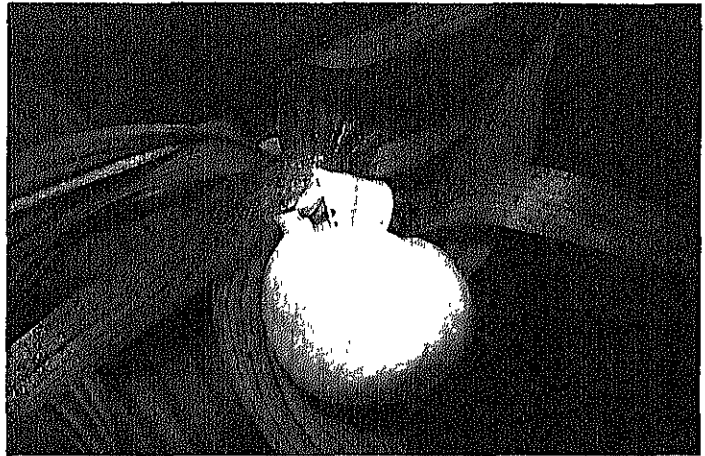
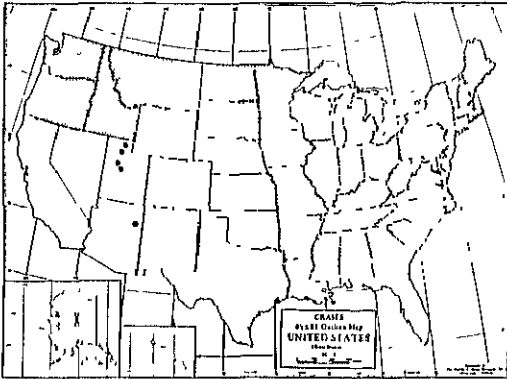
Cypripedium calceolus L.

Family: Orchid (Orchidaceae)

April-June

Field Marks: The lady's-slipper orchids are distinguished by the large lip petal that resembles a slipper. This species has a yellow lip and 3-6 leaves on the stem.





Local Notes:

Habitat: Along streams, in rich woods, in swamps.

Habit: Perennial herb with short rhizomes and fibrous roots.

Stems: Upright, up to 1 1/2 feet tall, glandular-hairy.

Leaves: Alternate, simple, 3-6 on each stem, broadly lanceolate to elliptic, up to 8 inches long, up to 4 inches wide, pointed at the tip, tapering to the sessile base, glandular-hairy, strongly veined.

Flowers: Usually 1 at the tip of the stem, sometimes 2 or more, each on a stalk at least 1/2 inch long, subtended by a pointed bract 2-5 inches long.

Sepals: 3, yellow, greenish, or purple-brown, one of them narrowly ovate, pointed, and wavy along the edges, the other 2 united and situated below the lip petal.

Petals: 3, 2 of them yellow, greenish, or purple-brown and wavy-edged, up to 4 inches long and up to 1/2 inch wide, the other one (the lip) forming a yellow slipper up to 2 1/2 inches long.

Stamens: 2.

Pistils: Ovary inferior, ribbed.

Fruits: Capsules ellipsoid, up to 2 inches long, up to 1/2 inch wide.

Notes: Throughout its range there is much variation in size of the yellow lip and color of the other petals and sepals.

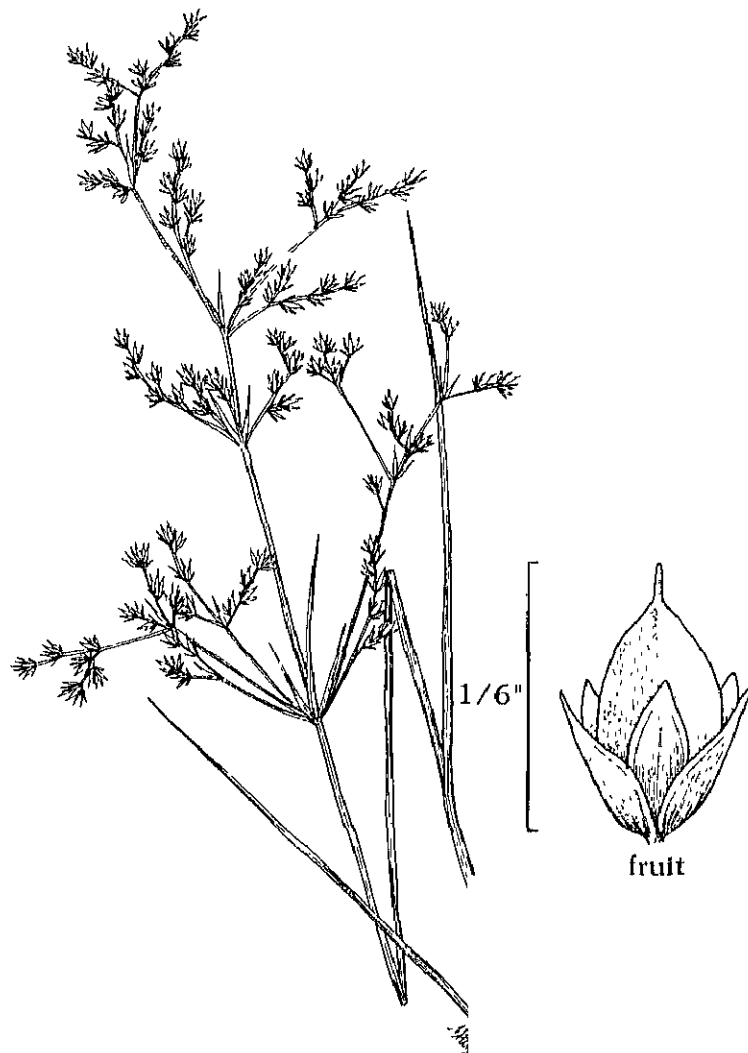
Jointed Rush

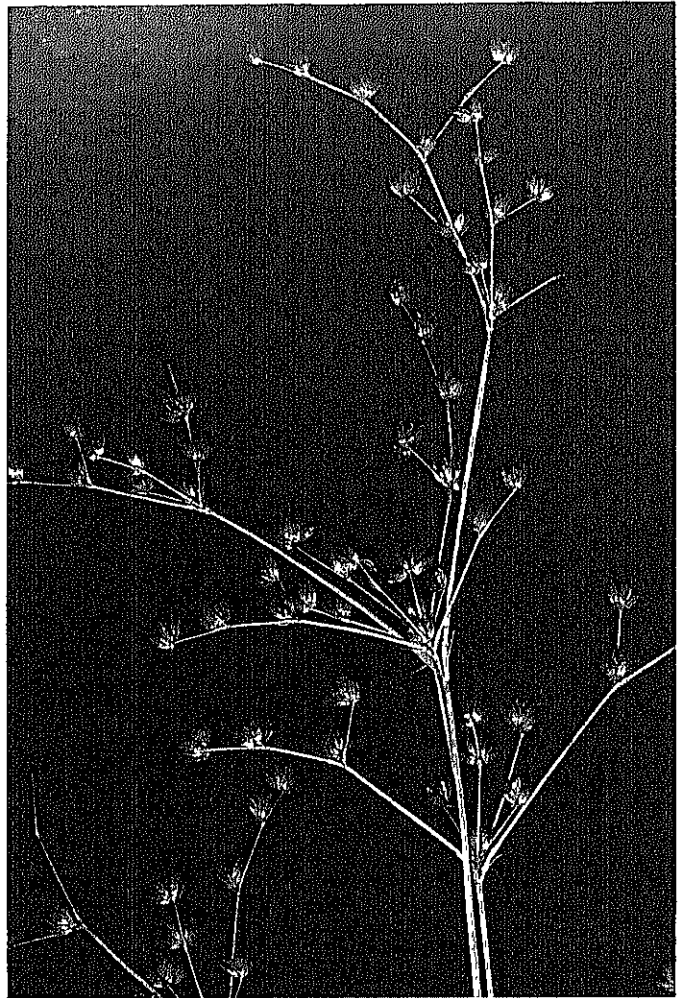
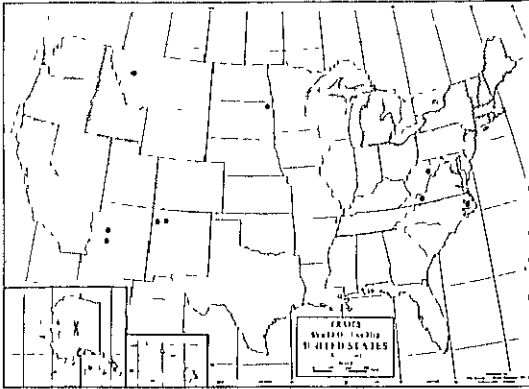
Juncus articulatus L.

Family: Rush (Juncaceae)

June-September

Field Marks: The distinguishing features of this rush are its terete, hollow, septate leaves, its inflorescence of spreading branches, and its pointed sepals and petals no more than 1/8 inch long





Local Notes:

Habitat: Along streams, around ponds, in marshes.

Habit: Perennial herb from a rather stout rhizome.

Stems: Upright, unbranched, up to 2 feet tall, smooth.

Leaves: Terete, hollow, septate, up to 6 inches long, up to 1/16 inch wide, smooth; ligule at tip of sheath up to 1/10 inch long.

Flowers: 3-10 in heads, with several heads in a branched inflorescence.

Sepals: 3, green, brown or purplish, free from each other, up to 1/8 inch long, pointed at the tip.

Petals: 3, green, brown or purplish, free from each other, up to 1/8 inch long, pointed at the tip.

Stamens: 6.

Pistils: Ovary superior, smooth

Fruits: Capsules ovoid, more or less triangular, pointed at the tip, up to 1/6 inch long, longer than the sepals and petals, shiny, dark brown.

Notes: The seeds are eaten by waterfowl.

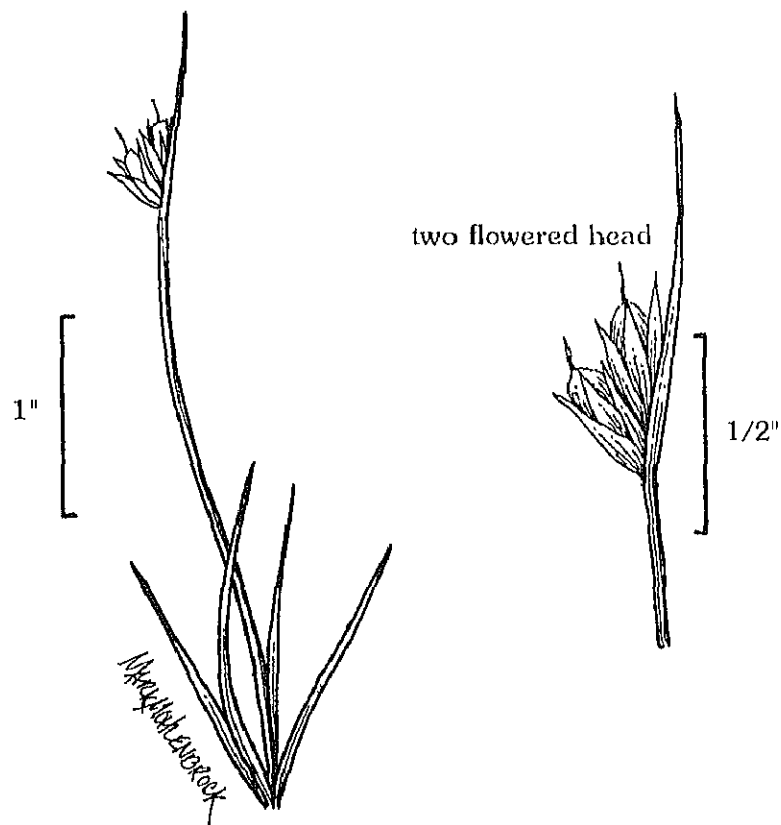
Two-flower Rush

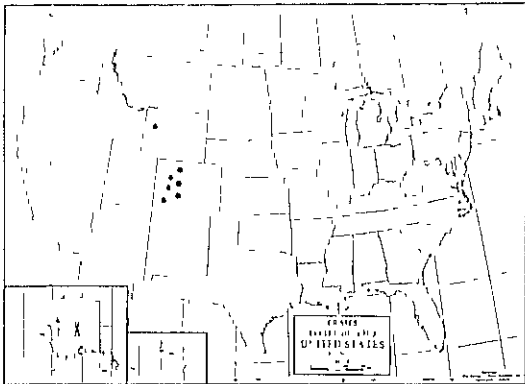
Juncus biglumis L.

Family: Rush (Juncaceae)

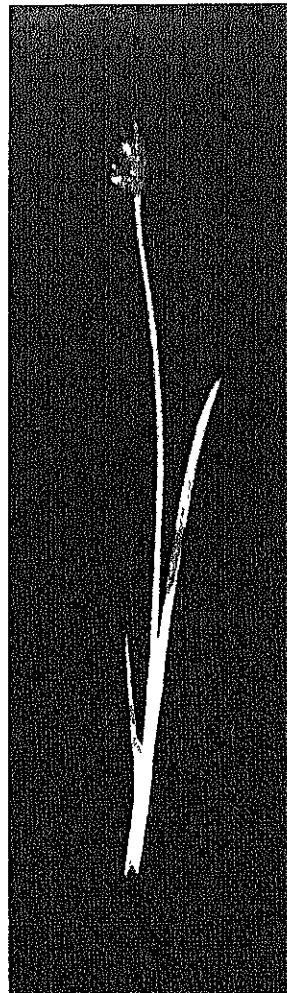
July-September

Field Marks: This dwarf perennial has solitary heads on leafless stems. The heads consist of 2 flowers subtended by a single bract. The capsule, which is sunken at the tip, is longer than the sepals and petals.





Local Notes:



Habitat: Wet gravels, sphagnum beds, around lakes and ponds, sometimes in shallow water

Habit: Perennial herb with a short rhizome

Stems: Upright, unbranched, bearing only a single head, smooth, up to 1 foot tall, usually much shorter.

Leaves: All basal or nearly so, inrolled into a very slender, hollow tube.

Flowers: 2-4 borne in a solitary head at the tip of the stem, the inflorescence subtended by a single bract that usually surpasses the head.

Sepals: 3, free from each other, purple-brown, 1/6-1/4 inch long, pointed or rounded at the tip.

Petals: 3, free from each other, purple-brown, 1/6-1/4 inch long, pointed or rounded at the tip.

Stamens: 6.

Pistils: Ovary superior, smooth

Fruits: Capsules obovoid, sunken at the tip, up to 1/4 inch long, longer than the sepals and petals; seeds with a short appendage at either end.

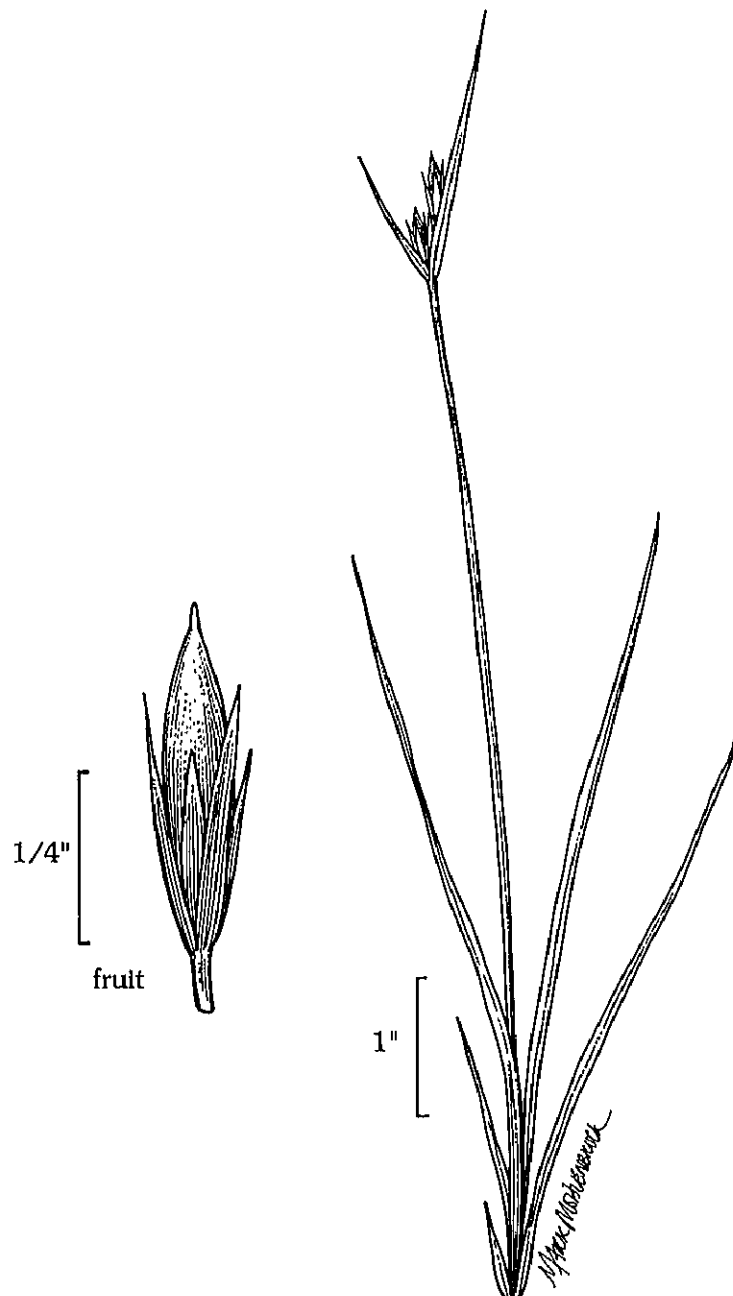
Chestnut Rush

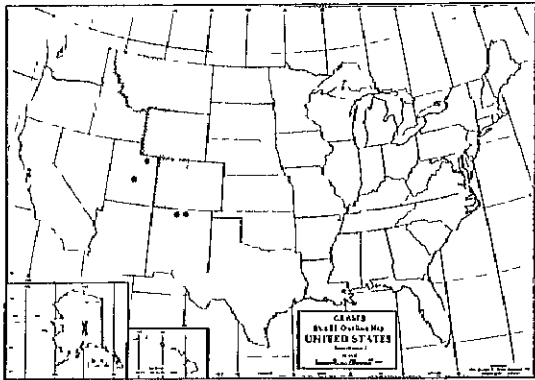
Juncus castaneus J. E. Smith

Family: Rush (Juncaceae)

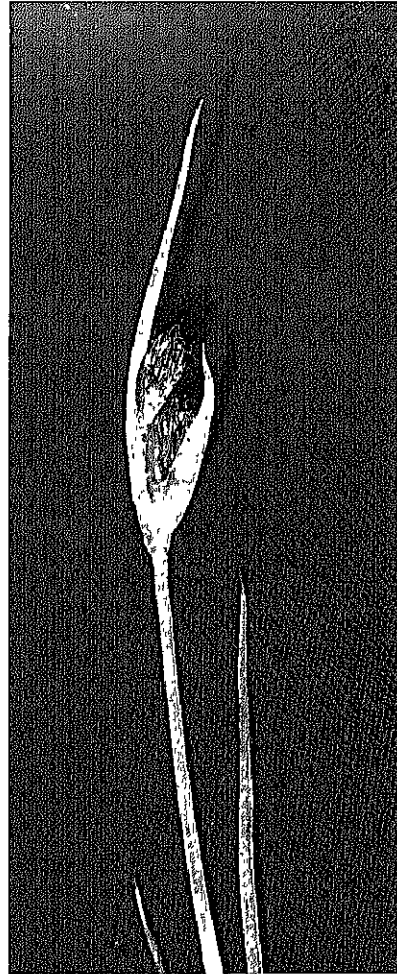
July-August

Field Marks: This alpine rush differs by its slender rhizomes, slender and pointed capsules longer than the sepals, and its seeds that have a tail longer than the rest of the seed.





Local Notes:



Habitat: Along streams, around and in ponds, fens, usually at or near timberline.

Habit: Perennial herb with slender rhizomes.

Stems: Upright, smooth, up to 18 inches long.

Leaves: Alternate, elongate, hollow, septate, rounded into a tube or folded, up to 1/10 inch wide.

Flowers: Several crowded into 1-4 heads, each head surpassed by a subtending bract; flowers up to 15 per head.

Sepals: 3, purple-brown, narrowly lanceolate, pointed at the tip, up to 1/3 inch long.

Petals: 3, purple-brown, narrowly lanceolate, pointed at the tip, up to 1/3 inch long.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Capsules lanceoloid, narrow, pointed at the tip, up to nearly 1/2 inch long, longer than the sepals and petals; seeds very narrow, with a tail longer than the body of the seed.

Notes: The seeds are eaten by small birds and small mammals.

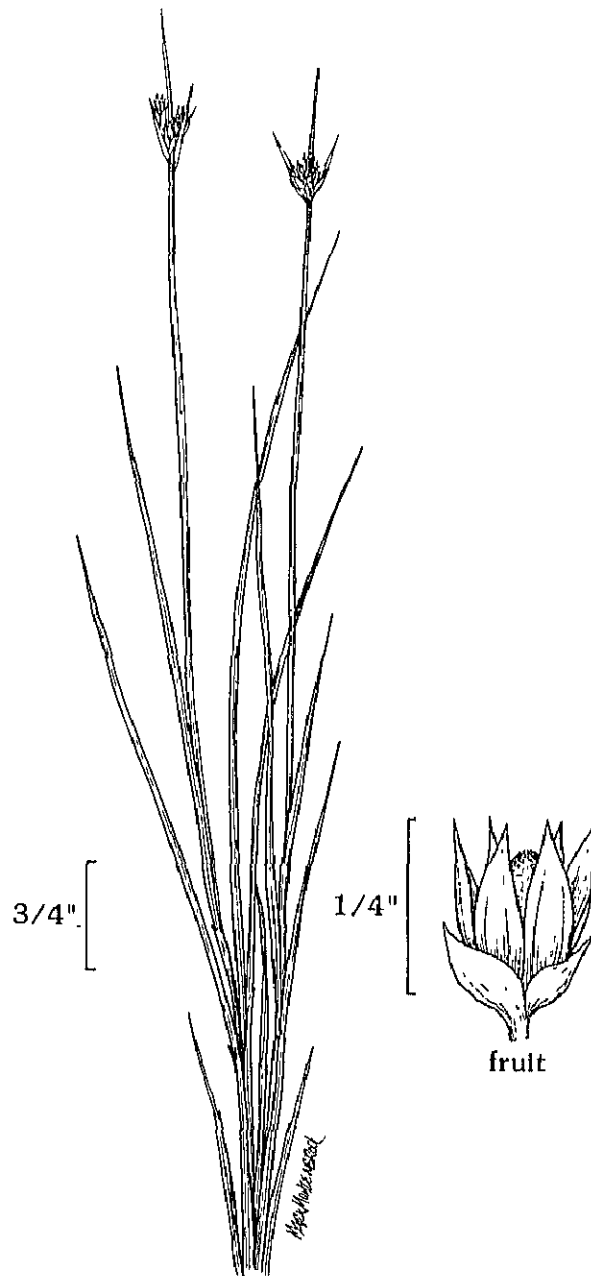
Colorado Rush

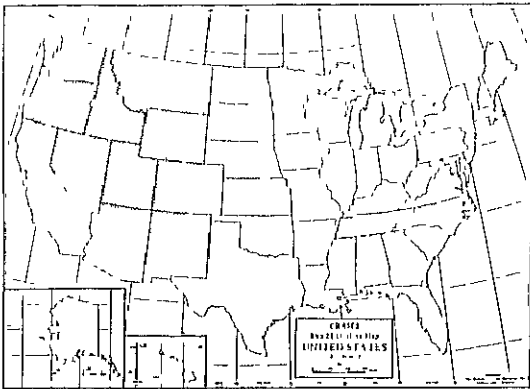
Juncus confusus Coville

Family: Rush (Juncaceae)

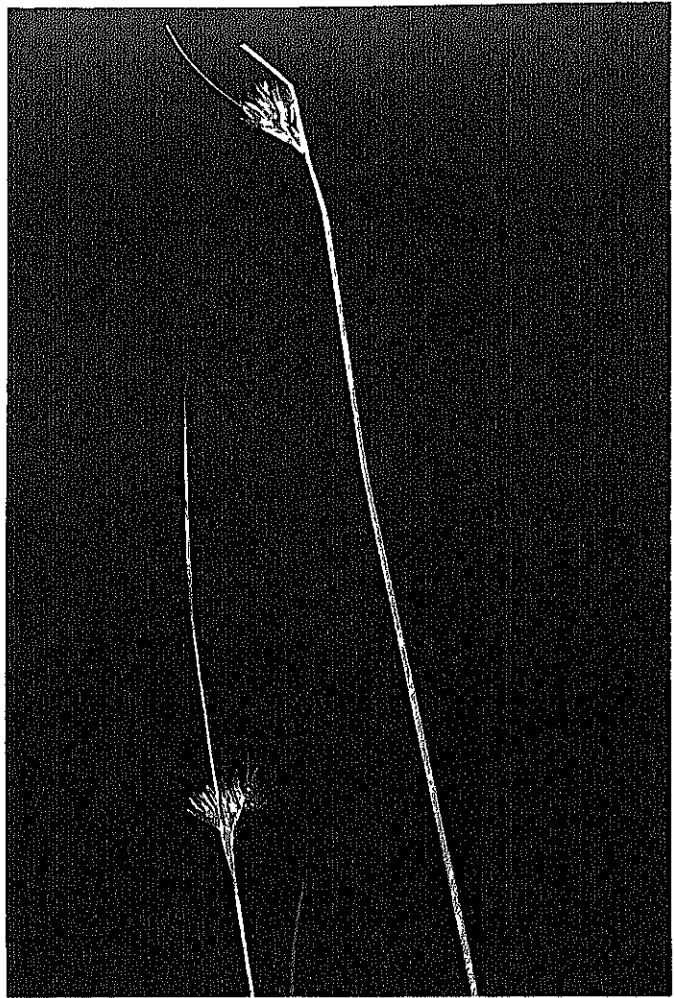
June-August

Field Marks: The presence of 2 small bracts at the base of each flower, the shallowly notched capsule, and the nearly thread-like leaves readily distinguish this species.





Local Notes:



Habitat: Wet meadows, along streams, in moist woods.

Habit: Perennial herb with fibrous roots.

Stems: Upright, slender, unbranched, up to 1 1/2 feet tall, smooth.

Leaves: Mostly near the base of the plant, thread-like to narrowly linear, flat or rolled up into a hollow tube, up to 1/24 inch wide, smooth.

Flowers: Several in small, crowded clusters up to 1 inch long, subtended by 1-3 leafy bracts up to 4 inches long, each flower subtended by a pair of small bracts.

Sepals: 3, free from each other, brown with a green mid-vein, up to 1/4 inch long.

Petals: 3, free from each other, brown with a green mid-vein, up to 1/4 inch long.

Stamens: 6.

Pistils: Ovary superior, smooth.

Fruits: Capsules oblongoid, more or less triangular, up to 1/6 inch long, a little shorter than the sepals and petals, shallowly notched at the tip.

Notes: The seeds are eaten by waterfowl.

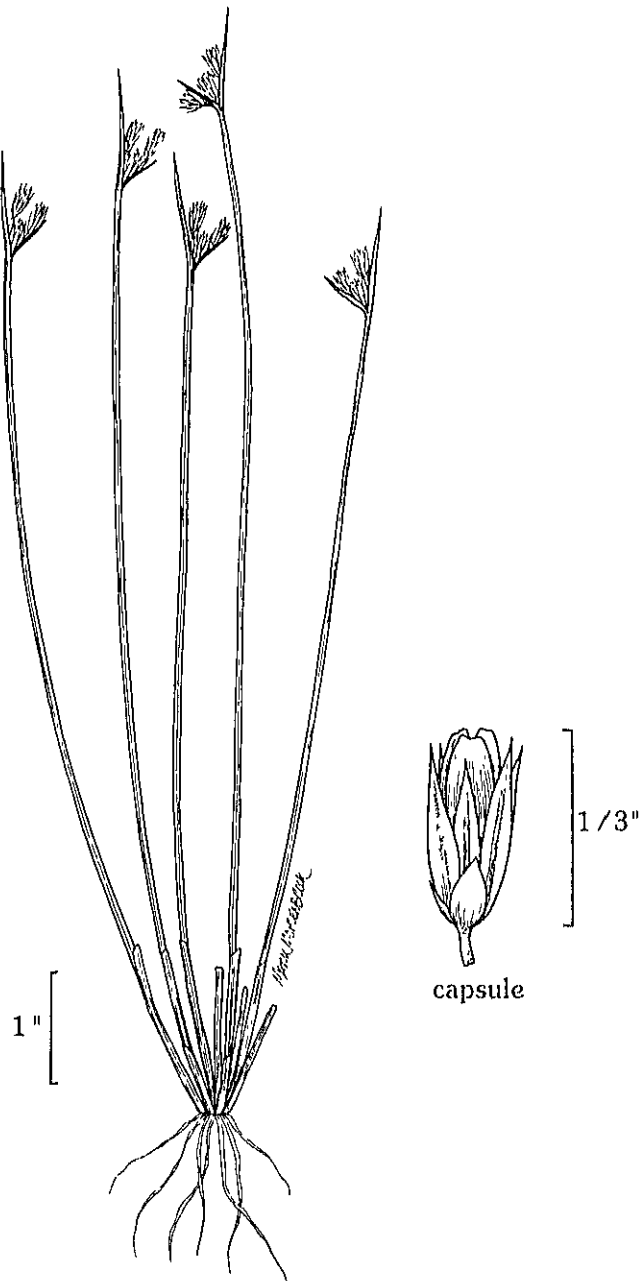
Drummond's Rush

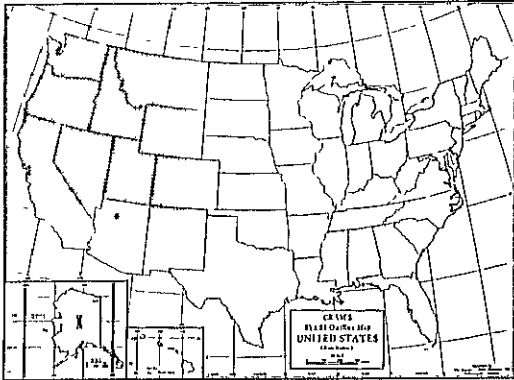
Juncus drummondii E. Meyer

Family: Rush (Juncaceae)

July-August

Field Marks: This rush is recognized by its 1-4 flowers near the tip of the stem, subtended by a short bract that appears to be a continuation of the stem. The capsules usually have a shallow notch at the tip, and the seeds have a long "tail" at each end.





Local Notes:



Habitat: Wet meadows, moist woods, along streams, sometimes above timberline.

Habit: Tufted perennial herb with fibrous roots.

Stems: Upright, unbranched, terete, up to 18 inches tall, smooth.

Leaves: Reduced to sheaths, or only with a bristle-like blade up to 2 1/2 inches long.

Flowers: 1-4 near the tip of the stem, subtended by a bract that appears to be a continuation of the stem; bract terete, smooth, up to 2 inches long.

Sepals: 3, lanceolate, 1/4-1/3 inch long, pointed at the tip.

Petals: 3, lanceolate, 1/4-1/3 inch long but usually slightly shorter than the sepals, pointed at the tip.

Stamens: 6.

Pistils: Ovary superior, smooth.

Fruits: Capsules ellipsoid, shallowly notched at the tip, 1/4-1/3 inch long; seeds up to 1/10 inch long, whitish, with a slender "tail" at each end.

Notes: The seeds are eaten by waterfowl.

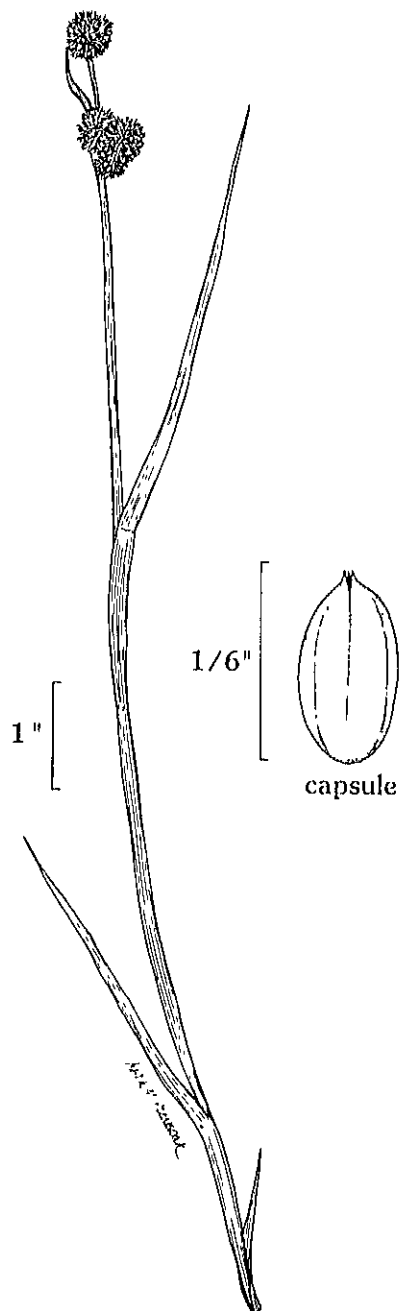
Three-stamen Rush

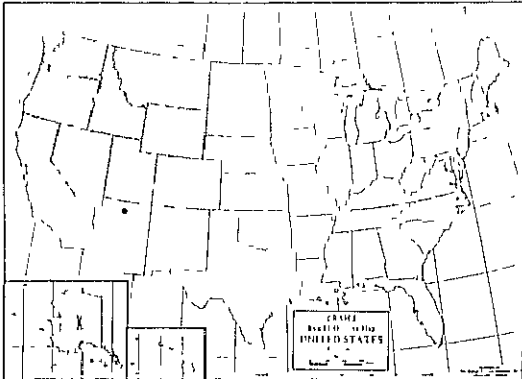
Juncus ensifolius Wikst.

Family: Rush (Juncaceae)

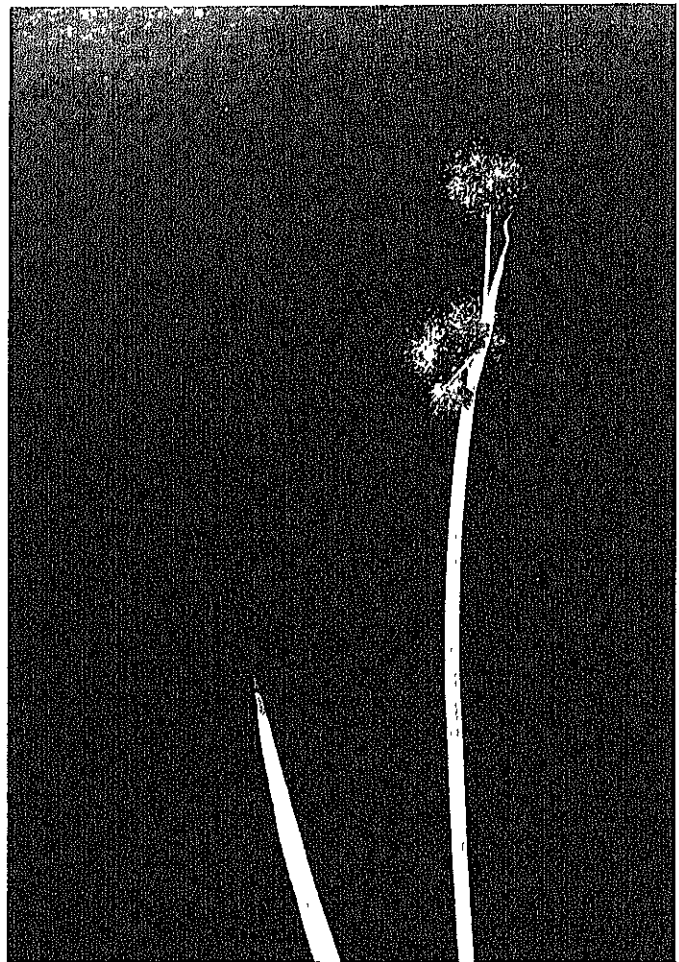
July-August

Field Marks: This rush has narrowly winged, flattened stems and bracts that are more than half the length of the inflorescence.





Local Notes:



Habitat: Along streams, in marshes.

Habit: Perennial herb with creeping rhizomes

Stems: Upright, flattened, narrowly winged, unbranched, up to 2 feet tall, smooth

Leaves: Most of the leaves near the base of the plant, flattened and folded along the mid-vein, up to 15 inches long, up to 1/3 inch wide, partially septate, smooth

Flowers: 4-25 borne in heads, the heads arranged in a panicle; each head spherical to hemispherical, up to 1/2 inch across, pale brown to dark brown to purple-black.

Sepals: 3, free from each other, up to 1/6 inch long, pointed at the tip.

Petals: 3, free from each other, up to 1/6 inch long, slightly shorter than the sepals, pointed at the tip.

Stamens: 3 or 6

Pistils: Ovary superior, smooth.

Fruits: Capsules oblongoid, up to 1/6 inch long, about as long as the sepals and petals, rounded at the tip or with a short point, smooth

Notes: This is an extremely variable species. Some plants have 3 stamens per flower, others have 6; some have few-flowered heads, others have many flowers; some have dark brown sepals and petals, others have light brown. The seeds are eaten by waterfowl.

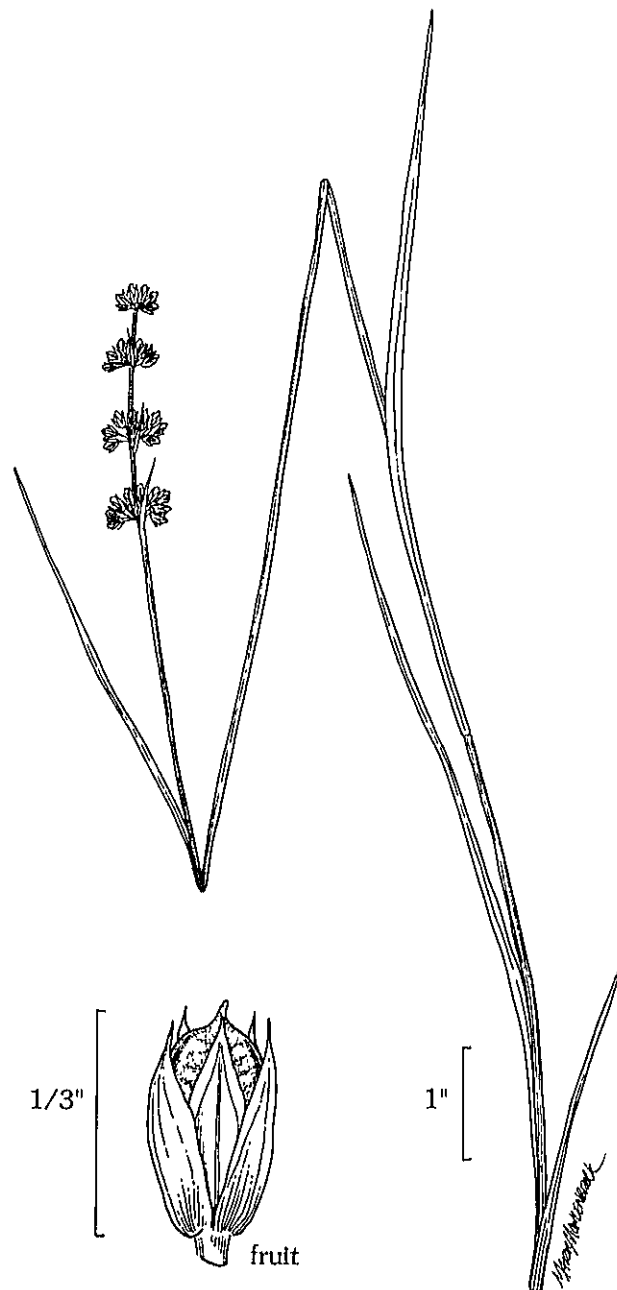
Long-style Rush

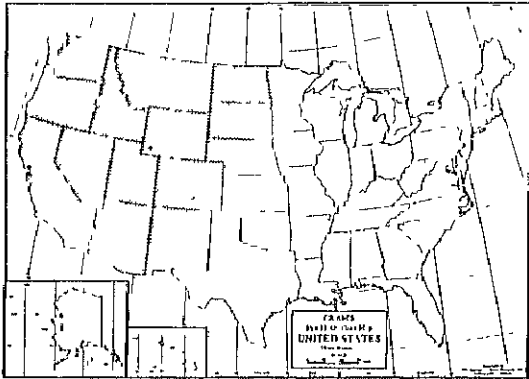
Juncus longistylis Torr.

Family: Rush (Juncaceae)

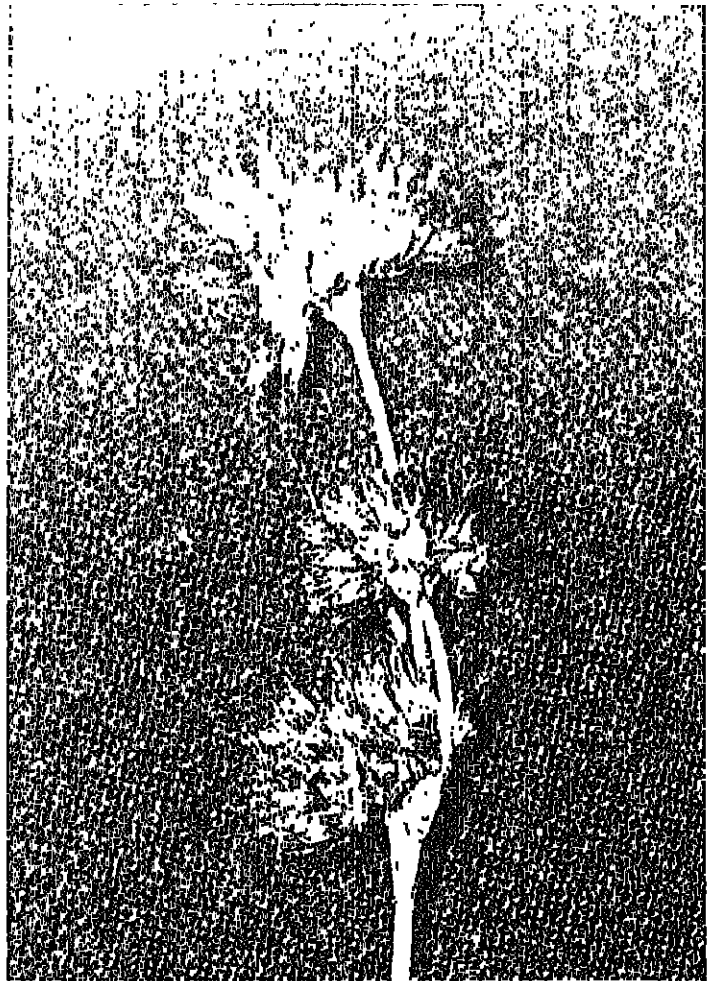
June-August

Field Marks: This rush is distinguished by its flat, non-septate leaves and its shiny, pointed sepals and petals up to 1/3 inch long.





Local Notes:



Habitat: Along streams, around ponds, in fens, from valleys to the mountains

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, up to 1 3/4 feet tall, smooth.

Leaves: Alternate, sometimes crowded at the base, elongated, narrow, up to 1/6 inch wide, smooth, flat, not septate.

Flowers: 3-10 crowded into heads, with 2-8 heads usually somewhat separated from each other at the tip of the stem, with bracts not surpassing the inflorescence.

Sepals: 3, green with a pale margin, shiny, broadly lanceolate, pointed at the tip, up to 1/3 inch long

Petals: 3, green with a pale margin, shiny, broadly lanceolate, pointed at the tip, up to 1/3 inch long, about as long as or only slightly shorter than the sepals

Stamens: 6.

Pistils: Ovary superior.

Fruits: Capsules angular, rounded at the tip, about as long as or slightly shorter than the sepals and petals.

Notes: The seeds are eaten by waterfowl.

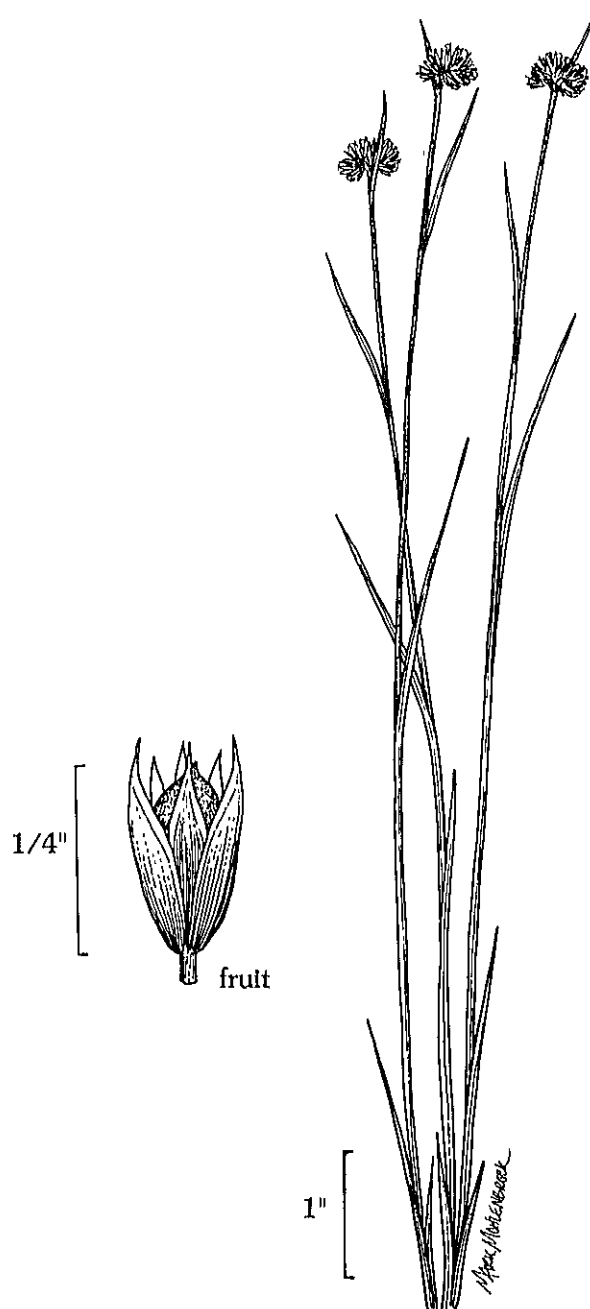
Merten's Rush

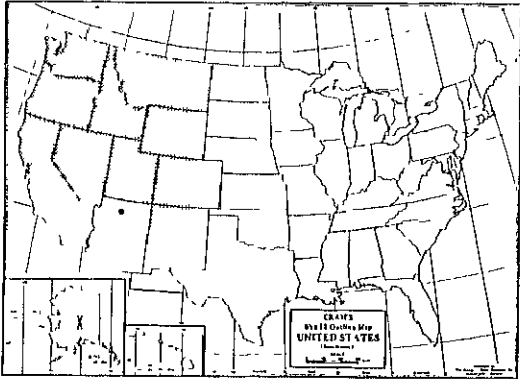
Juncus mertensianus Bong.

Family: Rush (Juncaceae)

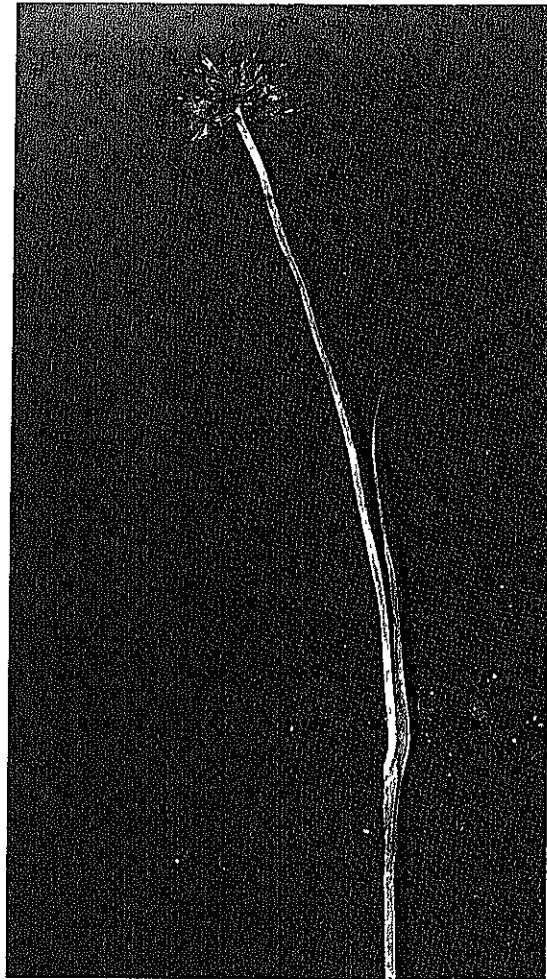
June-August

Field Marks: This rush is distinguished by its solitary spherical head with flowers having purple-black sepals and petals and round-tipped capsules shorter than the sepals and petals.





Local Notes:



Habitat: Wet meadows, along streams, in fens, at many elevations in the mountains.

Habit: Perennial herb from stout rhizomes.

Stems: Upright, up to 10 inches tall, smooth.

Leaves: Alternate, elongated, rolled into a hollow tube, septate, up to 1/10 inch wide.

Flowers: Numerous, crowded into a solitary head, the head spherical, up to 1/2 inch in diameter, subtended by a bract that surpasses the inflorescence.

Sepals: 3, lanceolate, pointed at the tip, purple-black, up to 1/6 inch long.

Petals: 3, lanceolate, pointed at the tip, purple-black, up to 1/6 inch long, shorter than the sepals.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Capsules mostly triangular, rounded at the tip, up to 1/4 inch long, shorter than the sepals and petals.

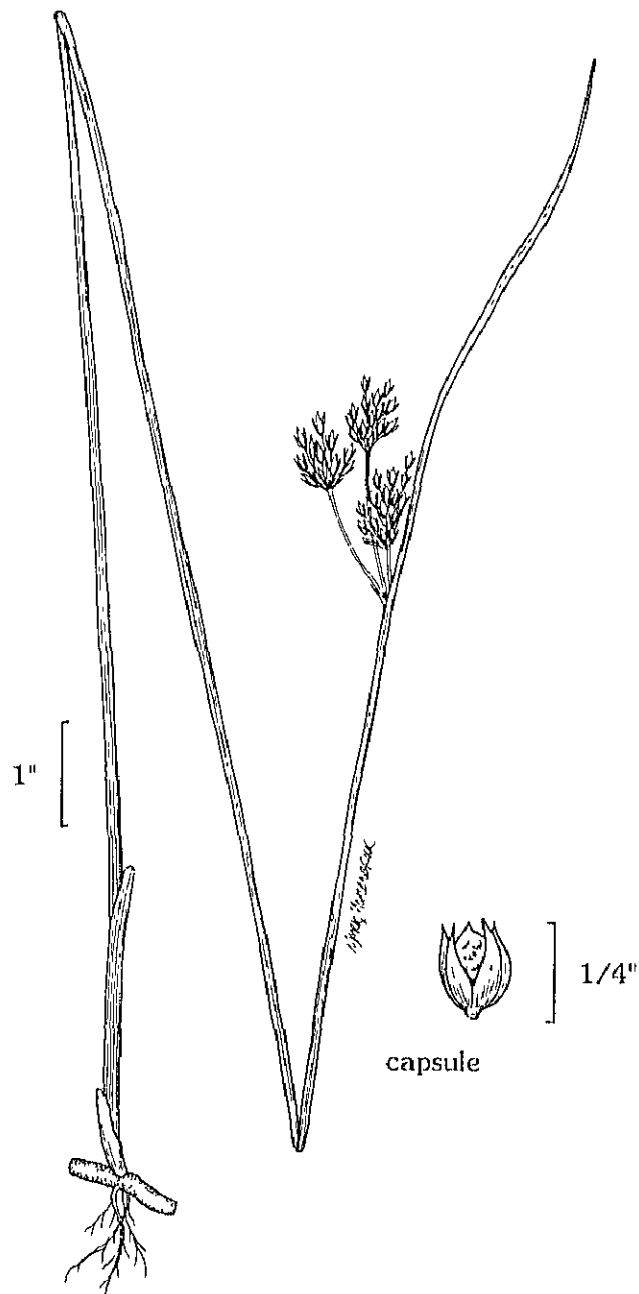
Mexican Rush

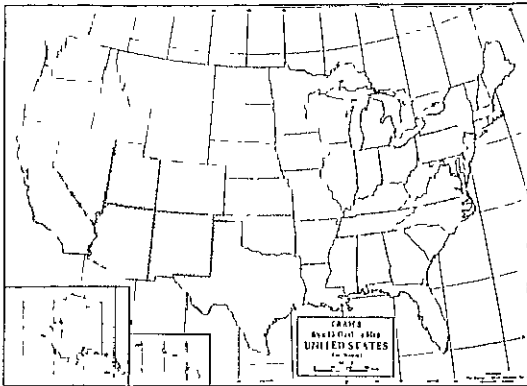
Juncus mexicanus Willd. ex J.A. & J.H. Schultes

Family: Rush (Juncaceae)

May-August

Field Marks: The bract that subtends the inflorescence appears to be an extension of the stem so that the flowers appear to be lateral





Habitat: Moist, usually alkaline, areas.

Habit: Perennial herb with stout, creeping rhizomes

Stems: Upright, unbranched, slender, up to 2 feet tall, smooth, sometimes flat and twisted.

Leaves: Elongated, up to 8 inches long, smooth.

Flowers: Several in a loose cluster near the top of the stem, the cluster up to 3 inches long; bract, which appears to be an upward extension of the stem, upright, up to 6 inches long, smooth.

Sepals: 3, free from each other, lanceolate, greenish or straw-colored, up to 1/4 inch long.

Petals: 3, free from each other, lanceolate, greenish or straw-colored, up to 1/4 inch long.

Stamens: 6

Pistils: Ovary superior, smooth.

Fruits: Capsules ovoid, brown, pointed at the tip, up to 1/4 inch long, seeds oblongoid

Notes: This species is similar to *Juncus balticus* and is sometimes merged with it.

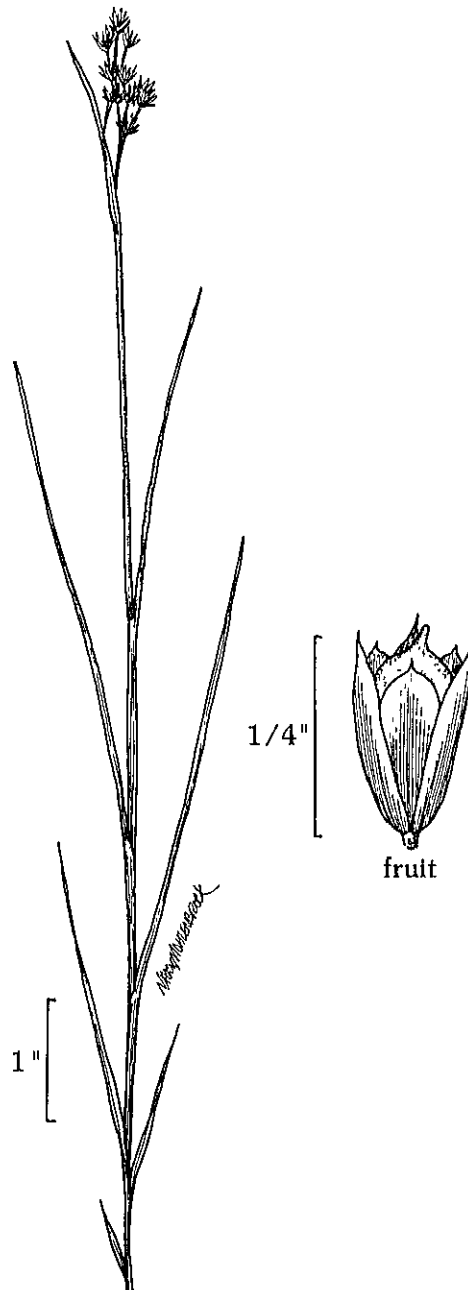
Sierra Rush

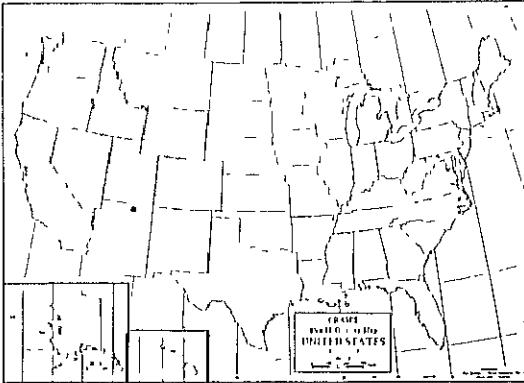
Juncus nevadensis S. Wats.

Family: Rush (Juncaceae)

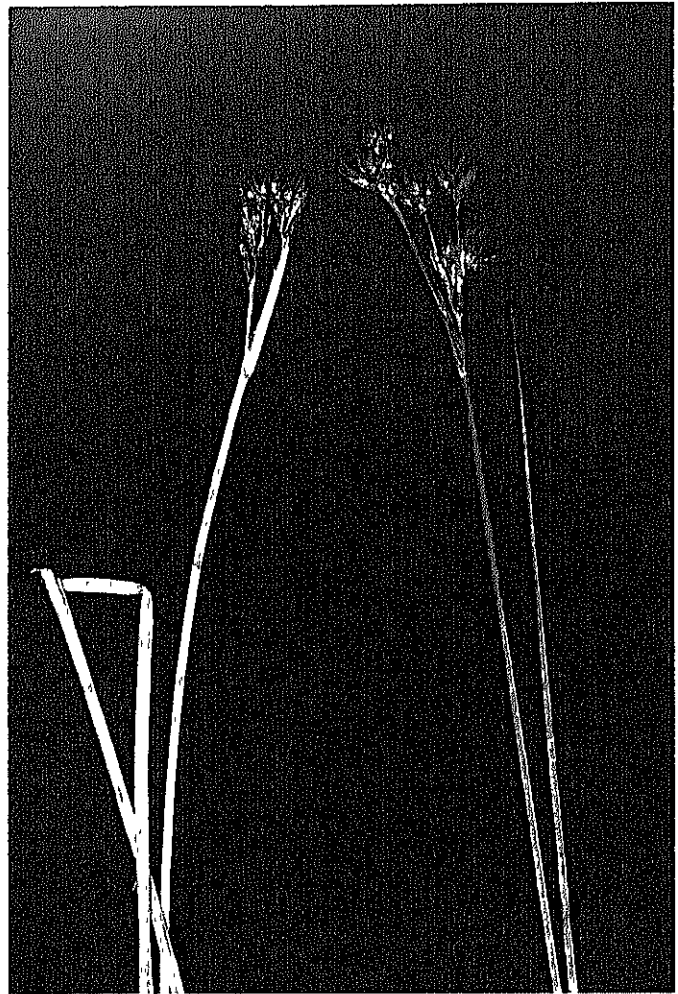
June-August

Field Marks: This rush differs by its septate, terete, hollow leaves, its dark brown sepals and petals, and its short-pointed capsules.





Local Notes:



Habitat: Along streams, in marshes, in wet meadows.

Habit: Perennial herb with several stems arising from an elongated rhizome.

Stems: Upright, unbranched, very slender, up to 2 feet tall, smooth.

Leaves: Elongated, terete, hollow, septate, up to 10 inches long, up to 1/10 inch wide, smooth.

Flowers: Several crowded into heads, with up to 30 heads in an inflorescence; heads hemispherical, 1/4-1/2 inch across.

Sepals: 3, free from each other, dark brown, lanceolate, pointed at the tip, up to 1/4 inch long.

Petals: 3, free from each other, dark brown, lanceolate, pointed at the tip, a little shorter than the sepals.

Stamens: 6.

Pistils: Ovary superior, smooth.

Fruits: Capsules oblongoid, with a short point at the rounded tip, dark brown, nearly as long as the petals.

Notes: The seeds are eaten by waterfowl.

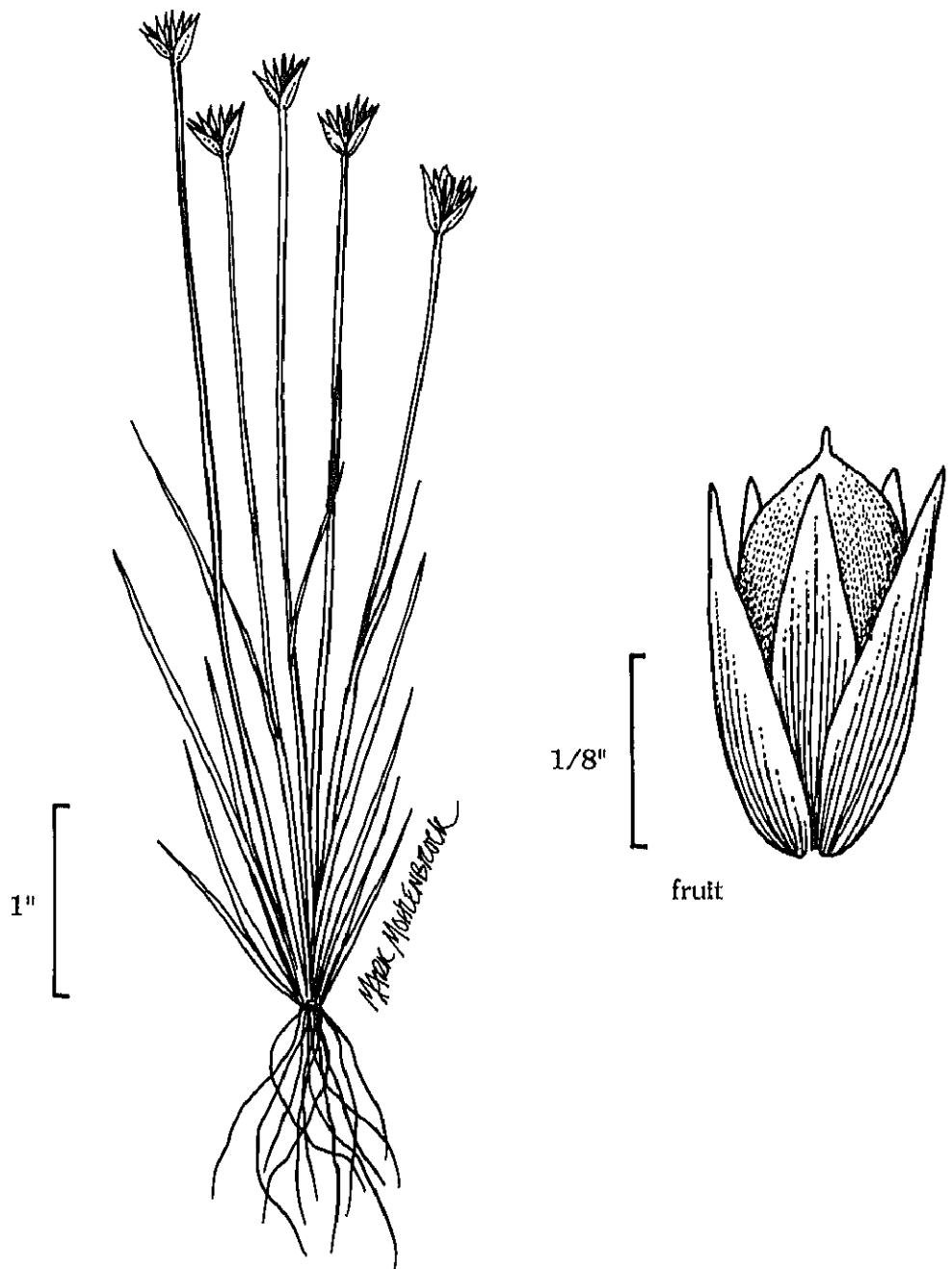
Three-flower Rush

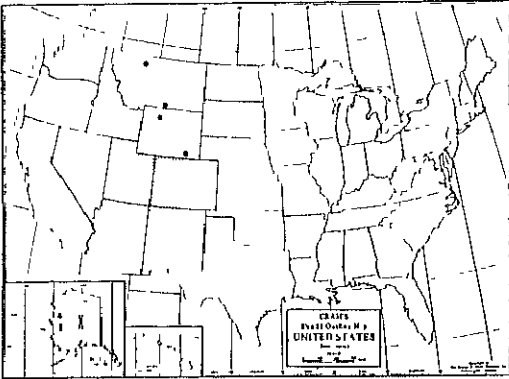
Juncus triglumis L.

Family: Rush (Juncaceae)

July-August

Field Marks: This densely tufted perennial rush differs from all other rushes by its solitary head of flowers subtended by an awn-tipped bract shorter than or barely as long as the head.





Local Notes:

Habitat: Fens, open wet areas, at or near timberline in the mountains.

Habit: Densely tufted perennial with fibrous roots.

Stems: Upright, very slender, up to 8 inches tall, smooth.

Leaves: Several crowded at the base of the plant, rolled up into a very slender hollow tube, about 1/36 inch wide, smooth but septate.

Flowers: 2-several crowded into a solitary head, the head subtended by an awn-tipped bract shorter than or barely longer than the head.

Sepals: 3, whitish or brown, lanceolate, pointed at the tip, up to 1/4 inch long.

Petals: 3, whitish or brown, lanceolate, pointed at the tip, slightly shorter than the sepals.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Capsules brown, rounded at the tip, up to nearly 1/4 inch long, usually slightly shorter than to barely as long as the sepals.

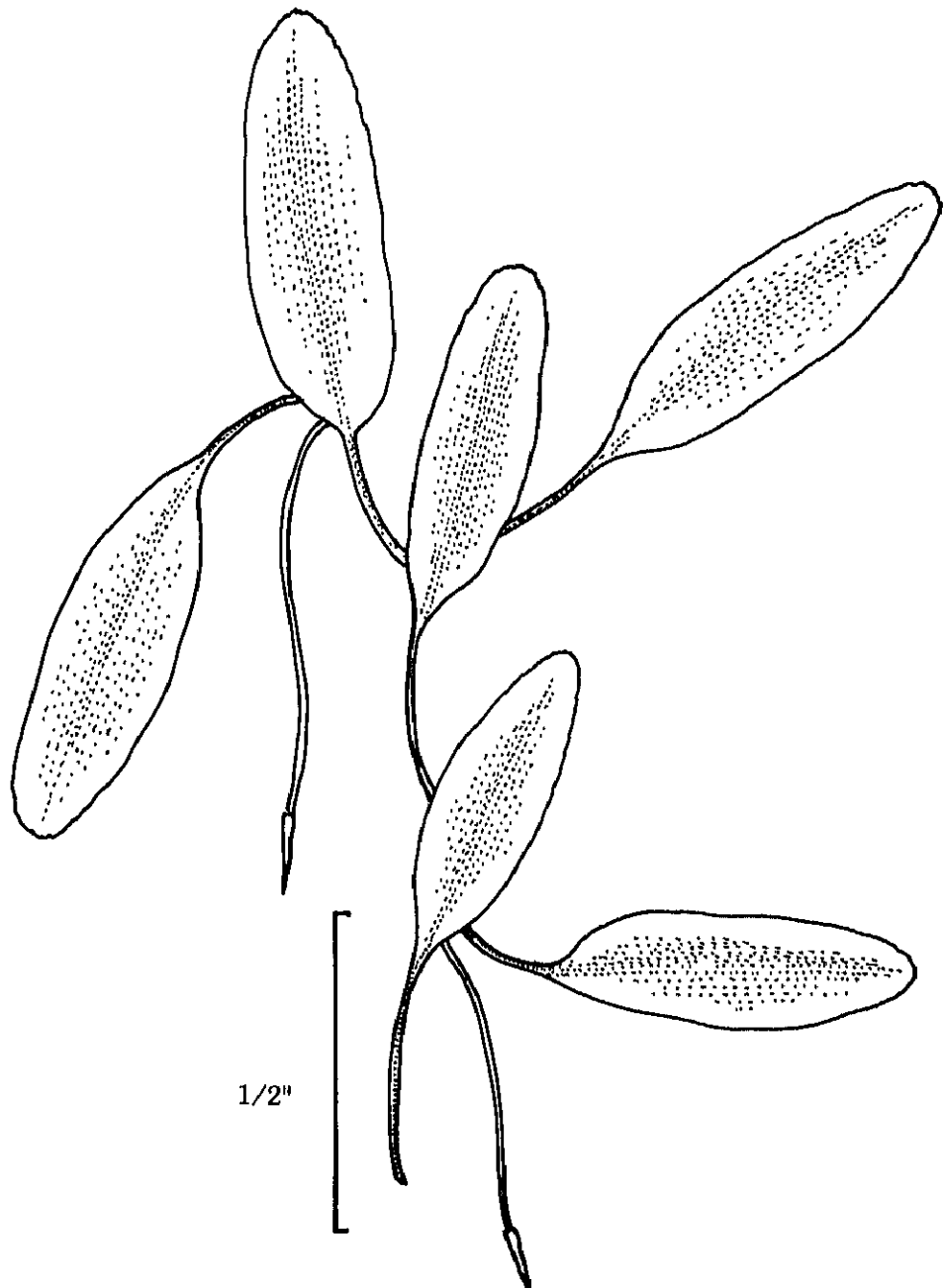
Star Duckweed

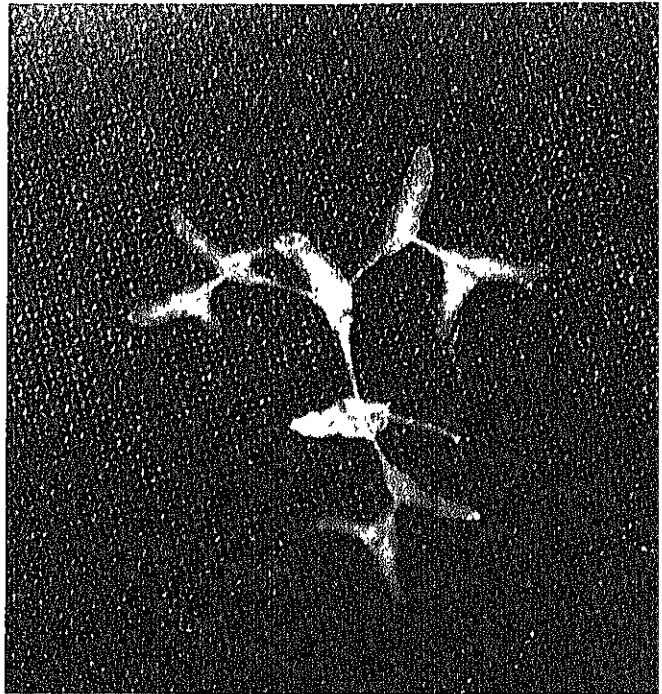
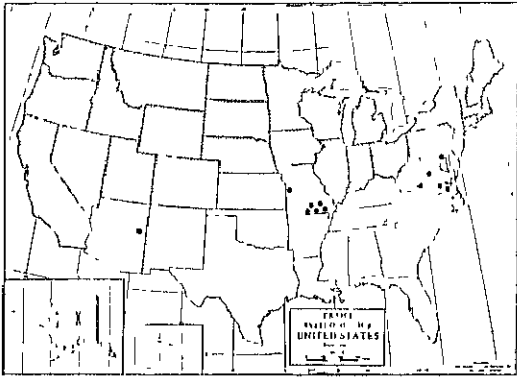
Lemna trisulca L.

Family: Duckweed (Lemnaceae)

June-October

Field Marks: This is the easiest duckweed to identify because of the elliptic fronds that taper to a narrow stalk at the base. The leaves usually cohere to each other in colonies.





Local Notes:

Habitat: Quiet waters of streams, lakes, ponds, and ditches

Habit: Floating aquatic plant, the fronds forming colonies of many individuals, one root per frond or absent.

Stems: 0

Leaves: Fronds elliptic, up to 1/2 inch long, up to 1/4 inch wide, with a narrow stalk at the base, flat, with 3 obscure veins, very finely toothed

Flowers: Rarely seen; when present, 2-3 in a microscopic pouch

Sepals: 0.

Petals: 0.

Stamens: 1 per flower.

Pistils: 1 per flower.

Fruits: Rarely seen, when present, 1-seeded

Notes: Although this species flowers and sets seeds on occasion, it usually reproduces asexually with new fronds developing on either side of the parent frond. The fronds are eaten by waterfowl. There is a report of this plant from Texas.

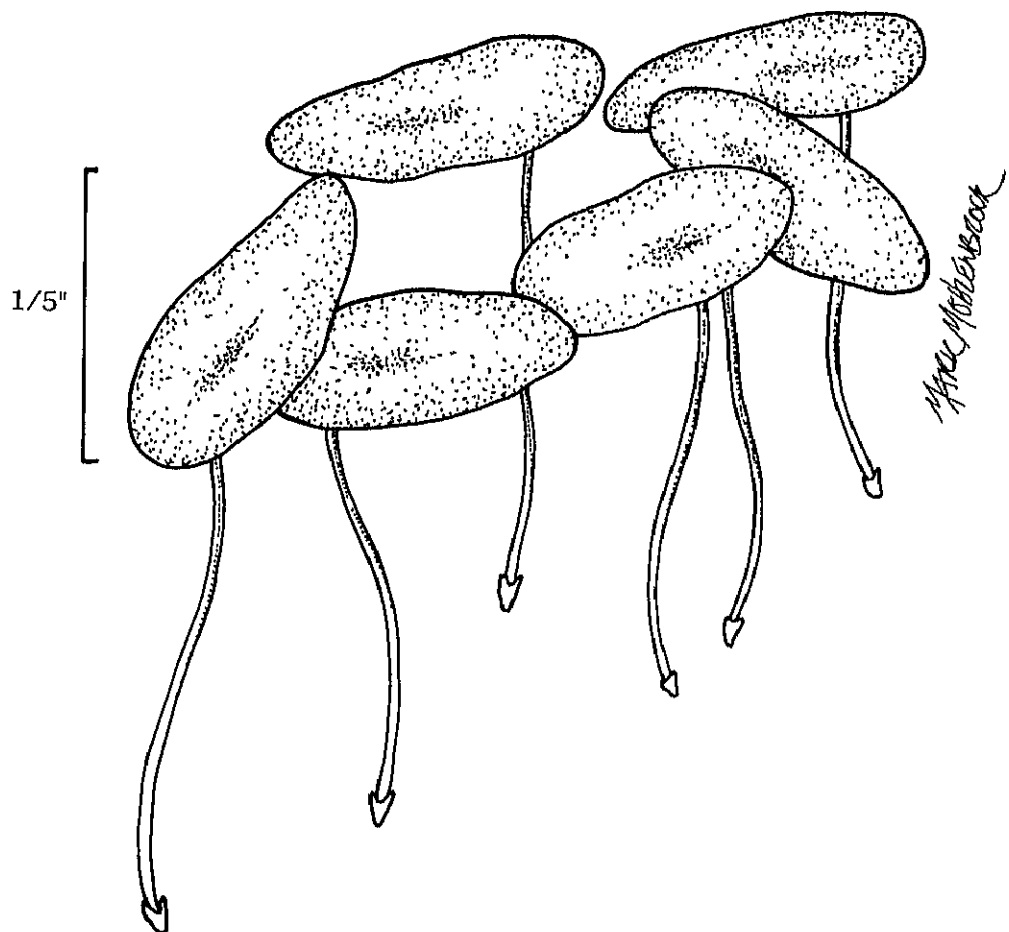
Pale Duckweed

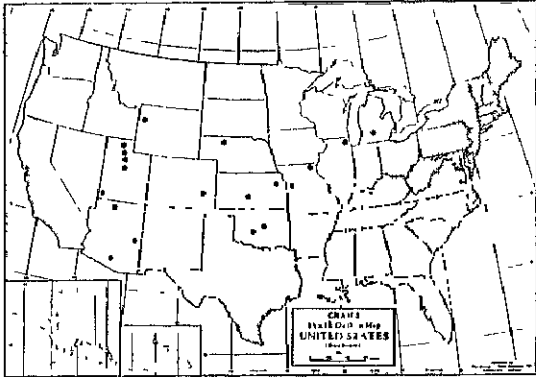
Lemna valdiviana Philippi

Family: Duckweed (Lemnaceae)

June-September

Field Marks: *Lemna* species are distinguished by a single root per frond. *Lemna valdiviana* differs by its asymmetrical base, pale green color, flat surfaces, and obscure venation.





Local Notes:



Habitat: Quiet waters of lakes, ponds, and streams.

Habit: Floating plant on the surface of the waters.

Stems: 0.

Leaves: Single fronds, or fronds in colonies of up to 10, up to 1/5 inch long, oblong to elliptic, usually asymmetrical at the base, flat, pale green, with obscure veins.

Flowers: Rarely found; if present, male and female flowers borne in pouches known as spathes; male flowers 2 per pouch.

Sepals: 0.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior.

Fruits: Rarely seen, but not winged

Notes: This duckweed is eaten by waterfowl. There are reports of this species from Idaho and southeastern Oregon.

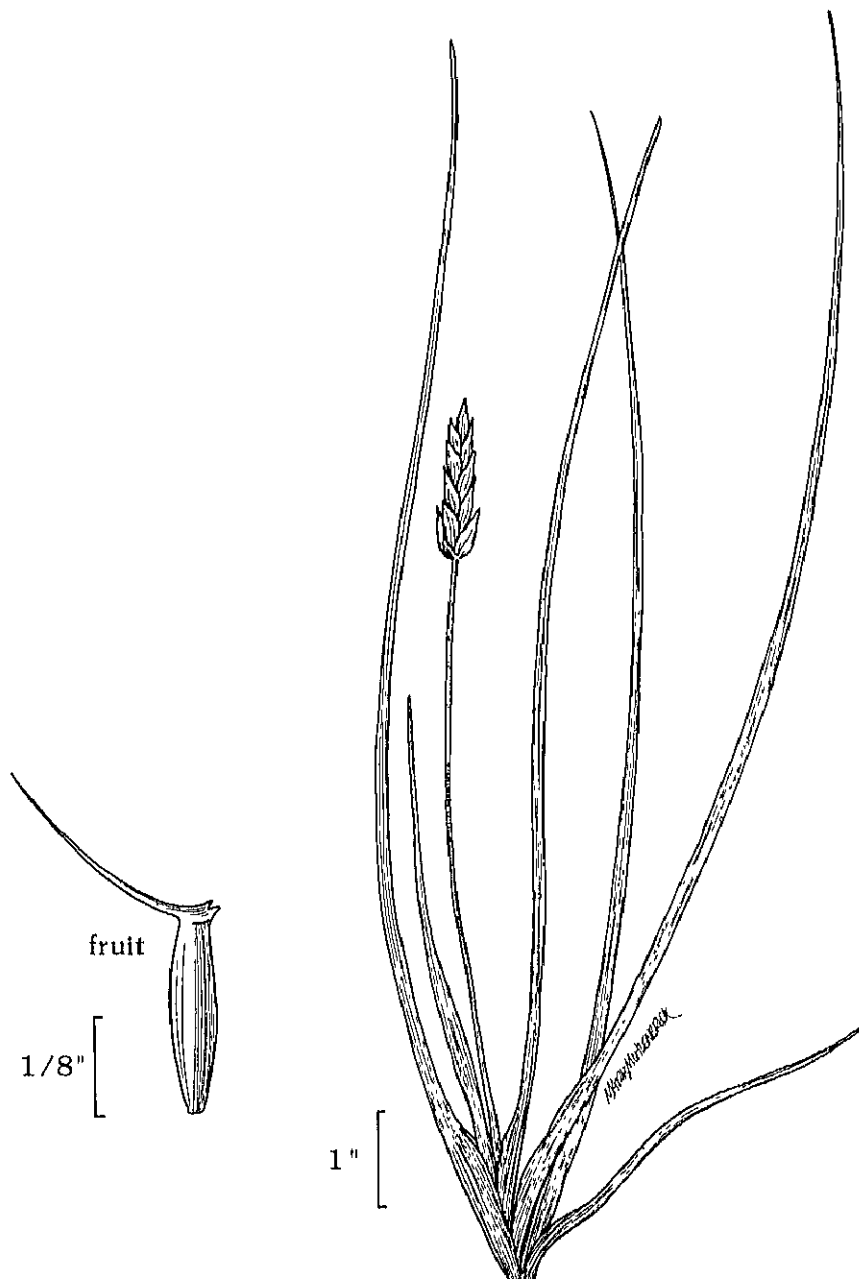
Flowering Quillwort

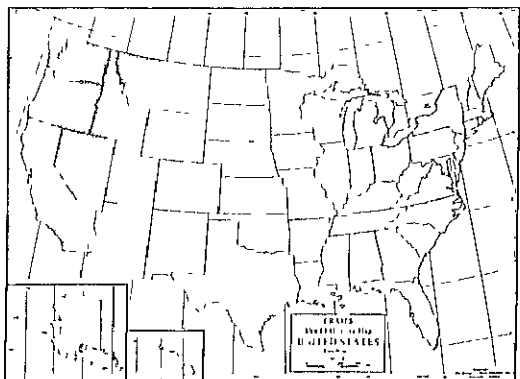
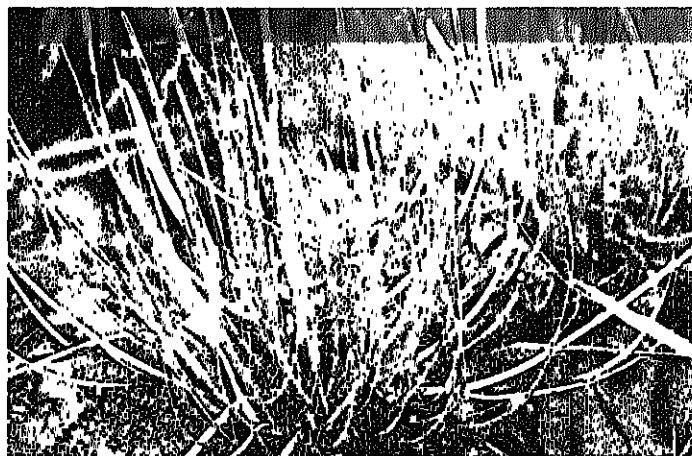
Lilaea scilloides (Poir.) Haum.

Family: Arrow-grass (Juncaginaceae)

March-October

Field Marks: This very distinctive species has elongated grass-like leaves with short spikes on slender, leafless stalks much shorter than the leaves. Some female flowers are hidden in basal leaf sheaths; other flowers are found in short spikes





Local Notes:

Habitat: Around lakes and ponds in mud, in slow streams.

Habit: Annual herb with fibrous roots.

Stems: No leafy stems present, only stems up to 8 inches tall with spikes of flowers present.

Leaves: All elongated, terete, fleshy, up to 1 foot long, up to 1/5 inch wide, smooth.

Flowers: Male and female flowers embedded in the fleshy axis of a spike, with some female flowers only borne singly and hidden by basal leaf sheaths; spikes 1/6-1/3 inch long; all flowers usually subtended by a bract.

Sepals: 1, oblong.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior; style of basal flowers up to 8 inches long.

Fruits: Those hidden in the sheaths narrowly oblongoid, flattened, light brown, 1/4-1/3 inch long, often with 1 or more slender horns at the tip; those in the spikes broadly lanceoloid, green, narrowly winged.

Notes: The flowering spike usually is borne at water level. Sometimes some of the flowers are not subtended by bracts.

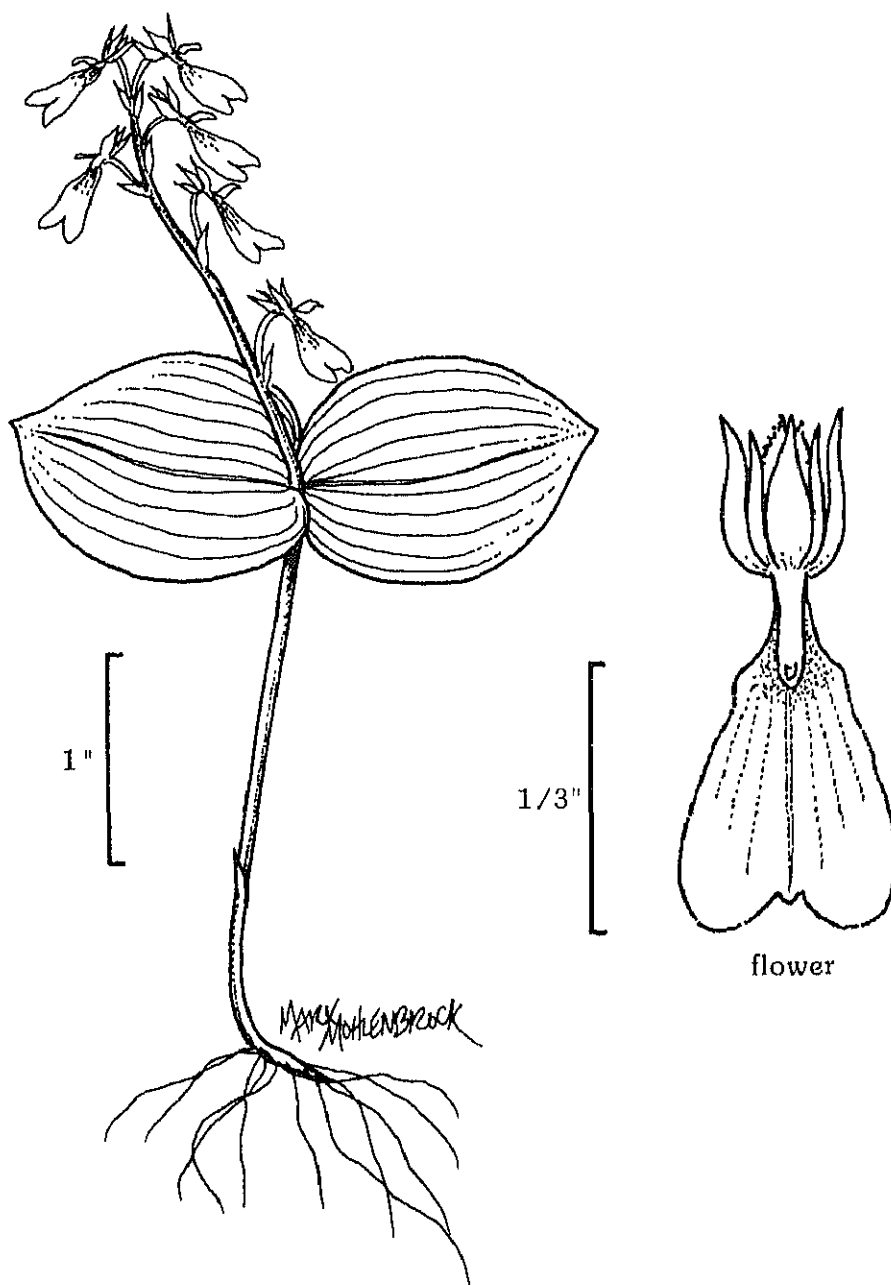
Broad-leaf Twayblade

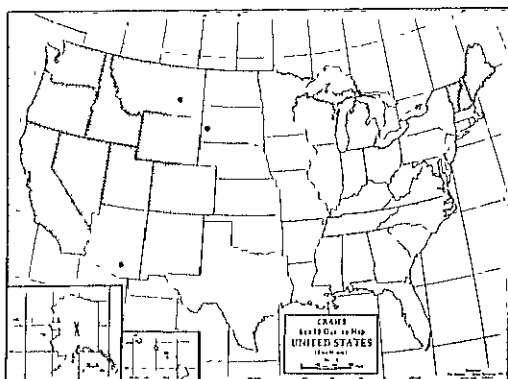
Listera convallarioides (Swartz) Nutt. ex Elliott

Family: Orchid (Orchidaceae)

June-July

Field Marks: This species is recognized by the single pair of round leaves on the stem, by the yellow-green flowers in an uncrowded raceme, and by the narrowly ellipsoid capsule.





Local Notes:

Habitat: Along streams, damp woods at the upper elevation of mountains.

Habit: Perennial herb with a short rhizome and fibrous roots.

Stems: Upright, unbranched, up to 10 inches tall, smooth below the pair of leaves, glandular-hairy above them.

Leaves: Opposite, simple, in a single pair about 1/2 way up the stem, nearly round, up to 2 1/2 inches long, nearly as wide, rounded or with a short point at the tip, rounded at the sessile base, smooth.

Flowers: 5-15 in an uninterrupted terminal raceme, each flower yellow-green, subtended by a bract 1/8-1/4 inch long; flower stalks slender, up to 1/3 inch long.

Sepals: 3, free from each other, yellow-green, linear to broadly lanceolate, pointed at the tip, up to 1/4 inch long, curved backward.

Petals: 3, 2 of them resembling the sepals, yellow-green, linear to broadly lanceolate, pointed at the tip, up to 1/4 inch long, curved backward; lip petal 1/3-1/2 inch long, 1/4-1/3 inch wide, yellow-green, notched at the tip, abruptly tapering to a very narrow base.

Stamens: 10, associated with the pistil to form a column.

Pistils: Ovary inferior, the pistil associated with the stamen to form a column.

Fruits: Capsules narrowly ellipsoid, up to 1/3 inch long, smooth.

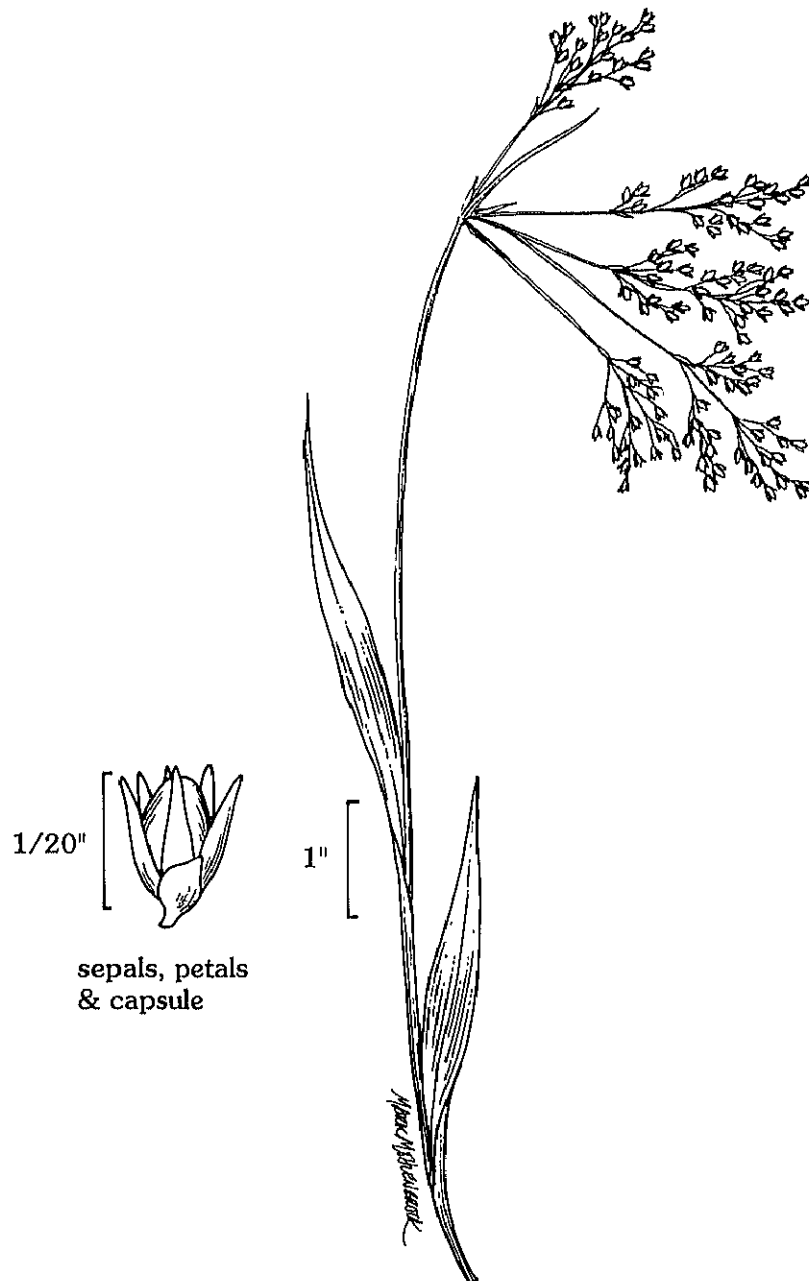
Small-flower Woodrush

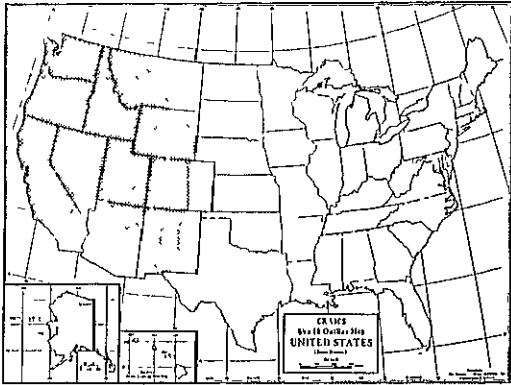
Luzula parviflora (Ehrh.) Desv.

Family: Rush (Juncaceae)

June-August

Field Marks: This is the only *Luzula* in North America with flowers borne singly in a much branched inflorescence.





Local Notes:



Habitat: Moist woods, rarely in open habitats.

Habit: Perennial herb with scaly stolons.

Stems: Upright, up to 2 feet tall, smooth, slender.

Leaves: Elongated, narrow, up to 8 inches long, up to 1/2 inch wide smooth except for long hairs at the top of the sheath, the tips of the leaves rolled into a hardened point.

Flowers: Borne singly at the tip of each branch, the branches numerous, the entire inflorescence up to 6 inches long, each flower subtended by 1 or more bracts.

Sepals: 3, usually straw-colored.

Petals: 3, usually straw-colored.

Stamens: 6.

Pistils: Ovary superior; stigmas 3.

Fruits: Capsules rusty-colored to blackish, ovoid, with a persistent style; seeds elliptic, shiny, about 1/20 inch long.

Notes: The much branched inflorescence is unlike that found in other woodrushes.

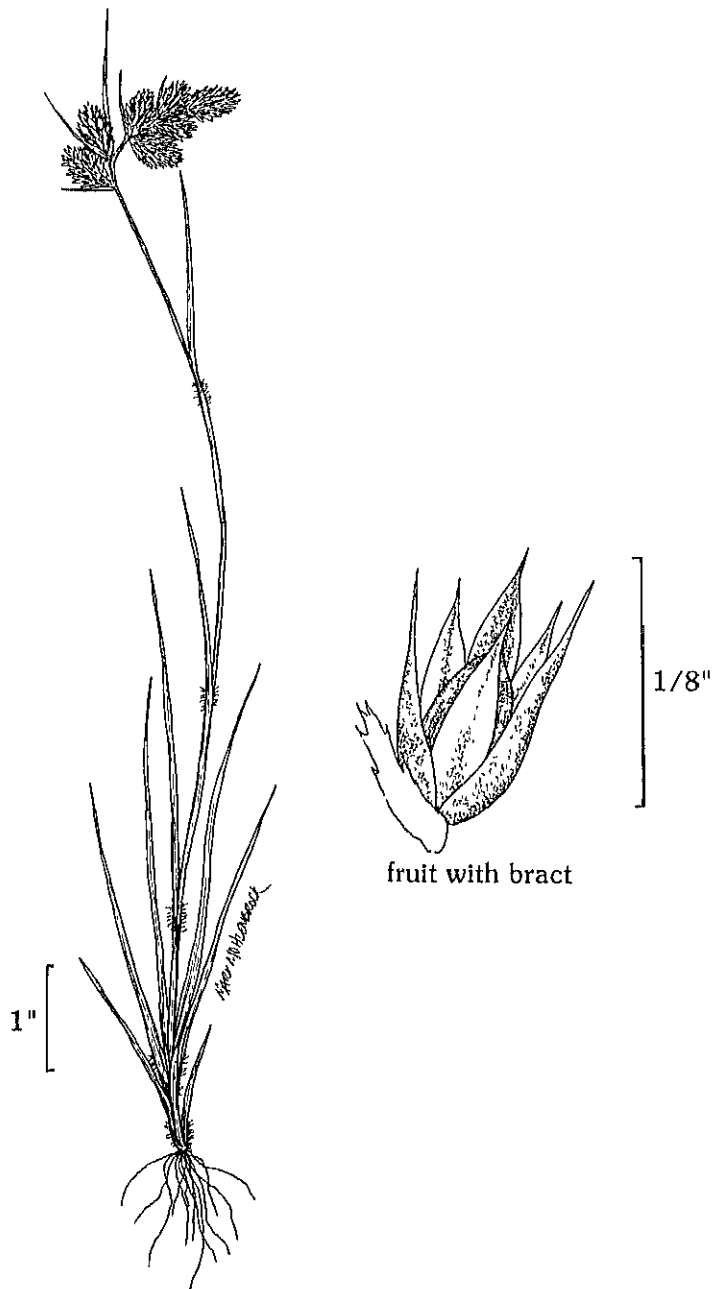
Spiked Woodrush

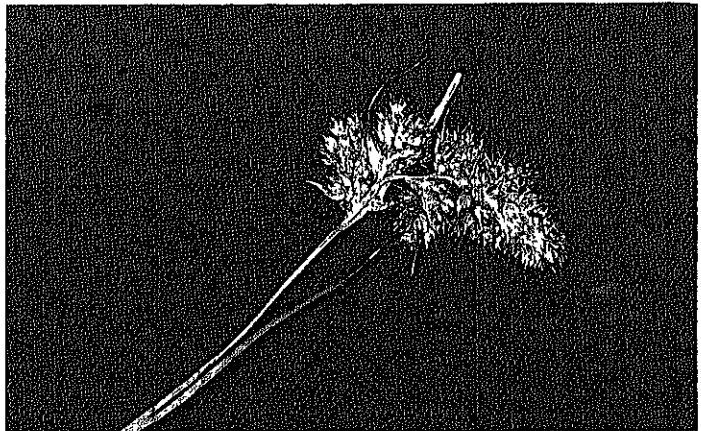
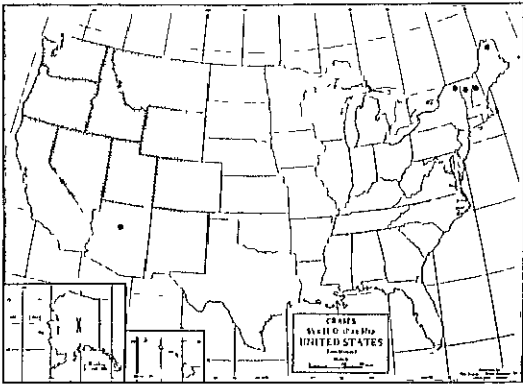
Luzula spicata (L.) DC.

Family: Rush (Juncaceae)

June-August

Field Marks: *Luzula* differs from *Juncus* in having hairs at least at the base of the leaves. This species differs from others in the genus by its alpine habitat, its flowers borne in heads, and its narrow leaves up to 1/6 inch wide





Local Notes:

Habitat: Along streams, wet meadows, often above timberline.

Habit: Tufted perennial with fibrous roots.

Stems: Upright, unbranched, up to 15 inches tall.

Leaves: Mostly near the base of the plant, elongated, narrow, flat, up to 6 inches long, with long hairs at the base.

Flowers: Crowded into a spike, the spikes sometimes interrupted, up to 1 1/2 inches long, sometimes nodding, subtended by fringed bracts.

Sepals: 3, free from each other, up to 1/8 inch long, brown with pale margins, with slender pointed tips.

Petals: 3, free from each other, up to 1/8 inch long, brown with pale margins, with slender pointed tips.

Stamens: 6

Pistils: Ovary superior, smooth.

Fruits: Capsules oblongoid, a little shorter than the sepals and petals, brown.

Notes: The seeds are eaten by birds and small mammals.

Fringed Water-plantain

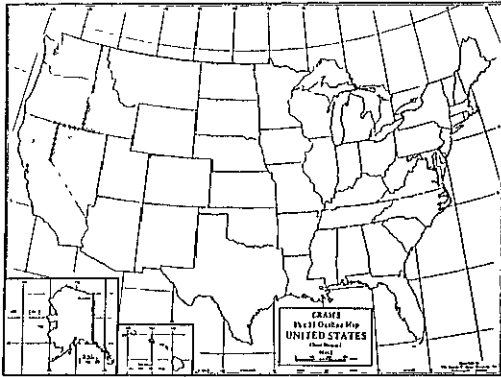
Machaerocarpus californicus (Torr. ex Benth.) Small

Family: Water-plantain (Alismataceae)

April-September

Field Marks: This species is readily recognized by its flowers which have 3 fringed, white petals with a yellow blotch near the base. This species also has elliptic to lanceolate, toothless leaves on long stalks.





Local Notes:



Habitat: Vernal pools, along streams, in mud flats.

Habit: Perennial herb with short, fleshy rhizomes.

Stems: Only the flower-bearing stem present above ground, up to 1 1/2 feet tall, smooth.

Leaves: All basal, elliptic to lanceolate, up to 3 1/2 inches long, up to 1 3/4 inches wide, tapering to the tip, rounded or tapering to the base, smooth, without teeth; stalks very long.

Flowers: Several borne in whorls on a leafless stem, with the whorls arranged in a panicle, each whorl of flowers subtended by broadly lanceolate to ovate, greenish bracts.

Sepals: 3, green, free from each other, about 1/6 inch long, smooth.

Petals: 3, white with a yellow blotch near the base, toothed or with a fringe along the edges, nearly round, 1/3-1/2 inch across.

Stamens: 6.

Pistils: 6-15 in a single whorl, the ovaries superior.

Fruits: 6-15 achenes spreading in a single whorl, each achene 1/6-1/2 inch long, with a short, stout beak on one side.

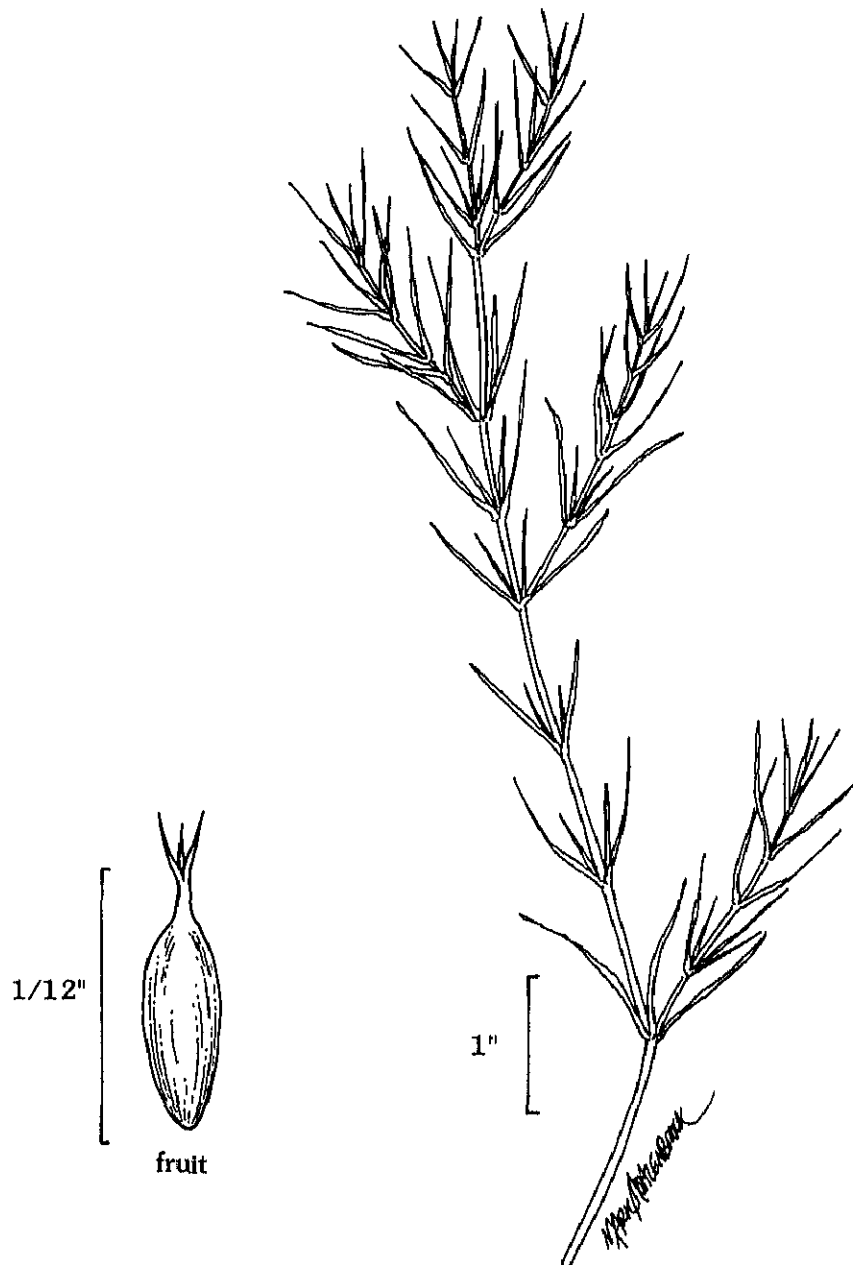
Southern Naiad

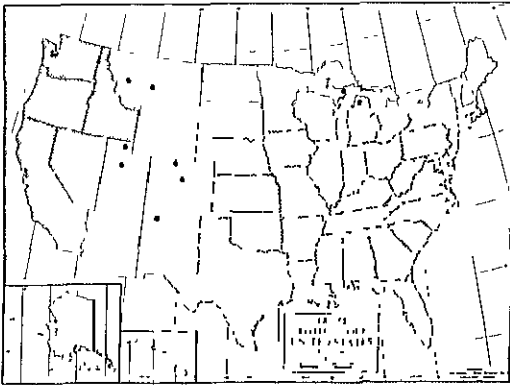
Najas guadalupensis (Spreng.) Morong

Family: Naiad (Najadaceae)

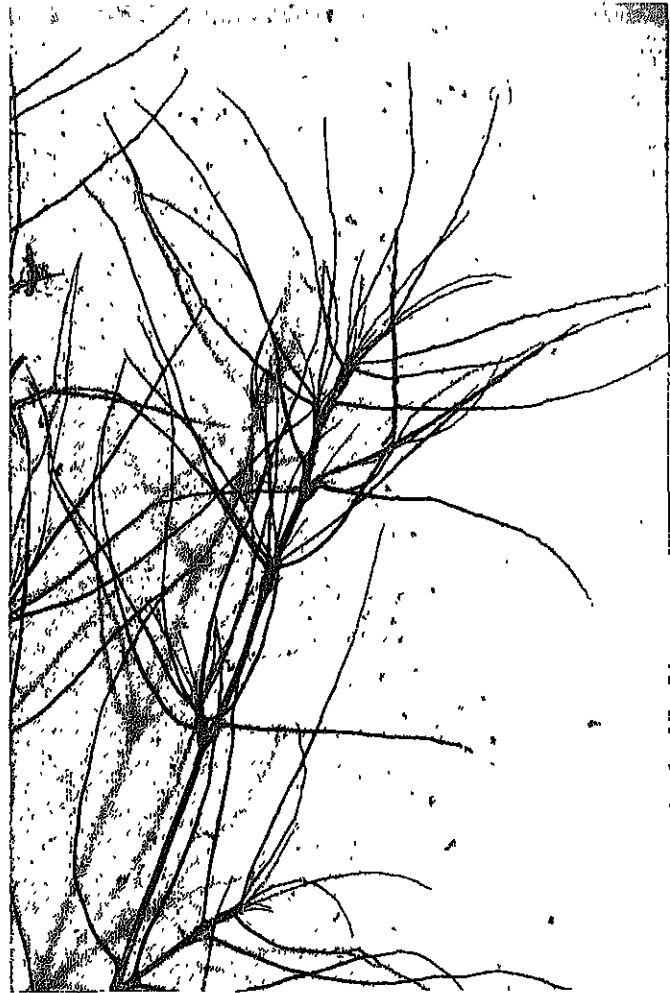
June-September

Field Marks: The nearly toothless leaves of this naiad are regularly spaced along the stem, rather than being crowded at the tip. The leaves do not taper to an elongated point, and the seeds are not shiny.





Local Notes:



Habitat: Quiet or floating water in ponds, lakes, or streams.

Habit: Submerged aquatic annual.

Stems: Very slender, much branched, essentially toothless, frequently forming mats, and sometimes rooting from the nodes.

Leaves: Very slender, alternate to subopposite, equally spaced along the stem and not crowded at the tip of the stem, essentially toothed or with a few tiny spinulose teeth, up to 1 1/2 inches long, about 1/20 inch wide, pointed or rounded at the tip but not tapering to a long point.

Flowers: Minute, unisexual, but with both sexes on the same plant, borne in the axils of the leaves.

Sepals: 0.

Petals: 0, although a pair of transparent membranaceous structures surround the stamen.

Stamens: One, protruding from the two transparent structures that surround it.

Pistils: One, with or without a transparent sheath around it; stigmas 2-4.

Fruits: Narrow and tapering to each end, up to 1/6 inch long, not shiny, dark brown, covered by a network pattern of elongated markings.

Notes: Some plants have their stems and leaves encrusted with lime. The seeds are eaten by waterfowl.

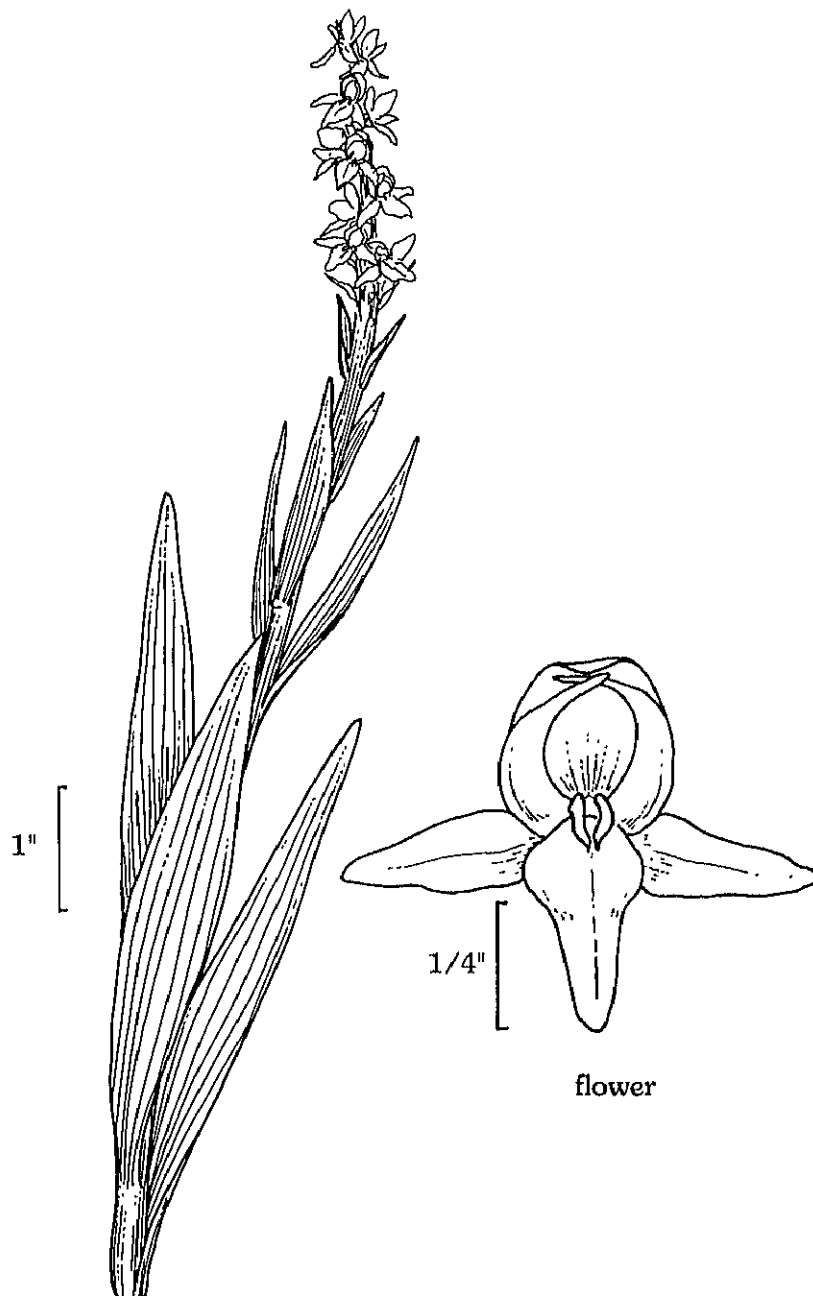
Leafy White Orchid

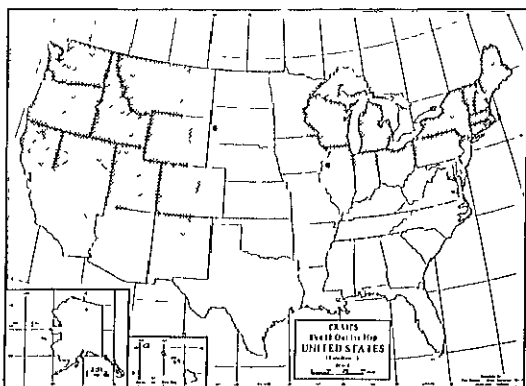
Platanthera dilatata (Pursh) Lindl. ex Beck

Family: Orchid (Orchidaceae)

June-September

Field Marks: This orchid has white or greenish white flowers, with the spur at least half as long as the lip petal. There are up to 12 lanceolate leaves on the stem.





Local Notes:

Habitat: Bogs, along streams, in marshes, wet meadows.

Habit: Perennial herb with slender, fleshy roots.

Stems: Upright, slender to stout, smooth, up to 3 feet tall.

Leaves: Alternate, simple, up to 12 per stem, narrowly lanceolate to lanceolate, rounded to pointed at the tip, tapering to the base, smooth, up to 12 inches long, up to 2 1/2 inches wide.

Flowers: Several in racemes, fragrant, white to greenish white.

Sepals: 3, one of them forming a hood with the petals, up to 1/3 inch long, the other 2 elliptic to lanceolate, up to nearly 1/2 inch long.

Petals: 3, narrowly to broadly lanceolate, up to 1/3 inch long, the lip petal up to 1/2 inch long, up to 1/4 inch wide; spur more than half as long to as long as the lip petal.

Stamens: 1.

Pistils: Ovary inferior.

Fruits: Capsules ellipsoid, 1/3-1/2 inch long, up to 1/6 inch wide.

Notes: There is variation in the color of the flower and the length of the spur. The earlier frequently used name for this orchid was *Habenaria dilatata*.

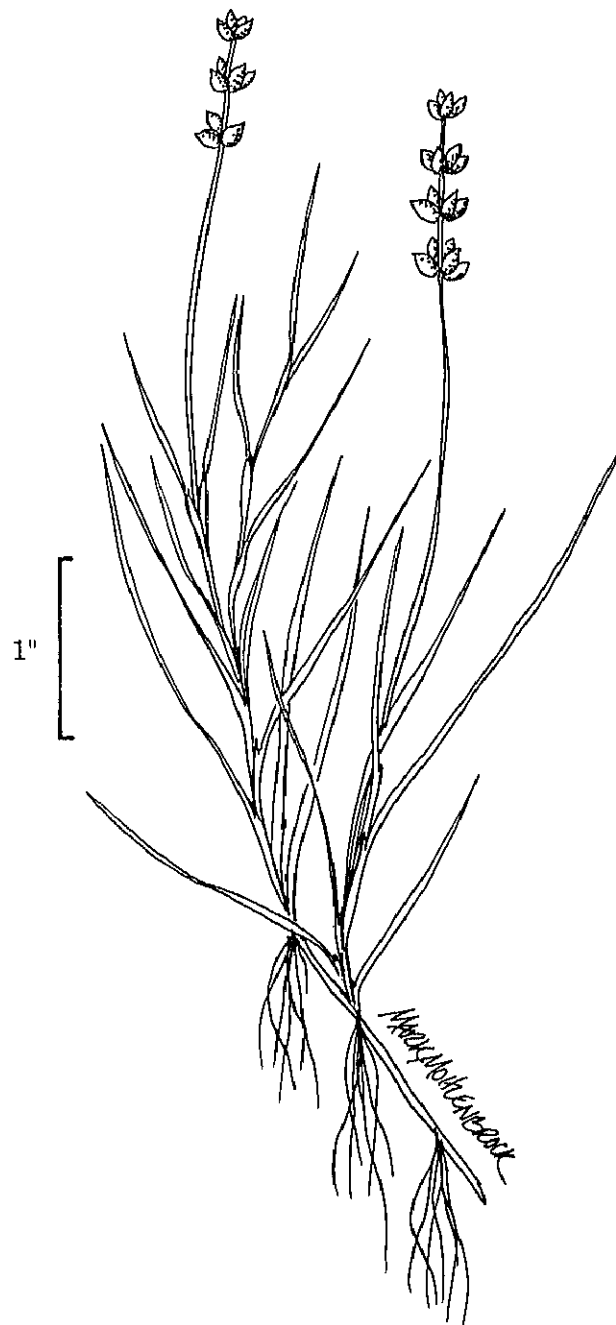
Fine-leaf Pondweed

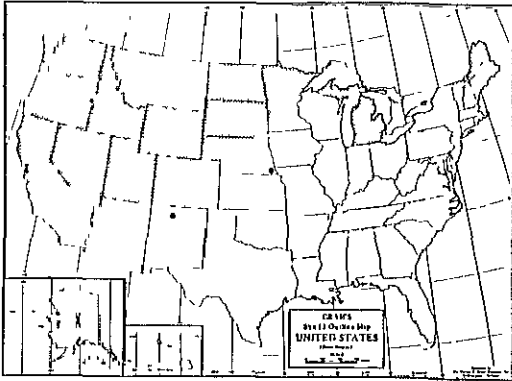
Potamogeton filiformis Pers.

Family: Pondweed (Potamogetonaceae)

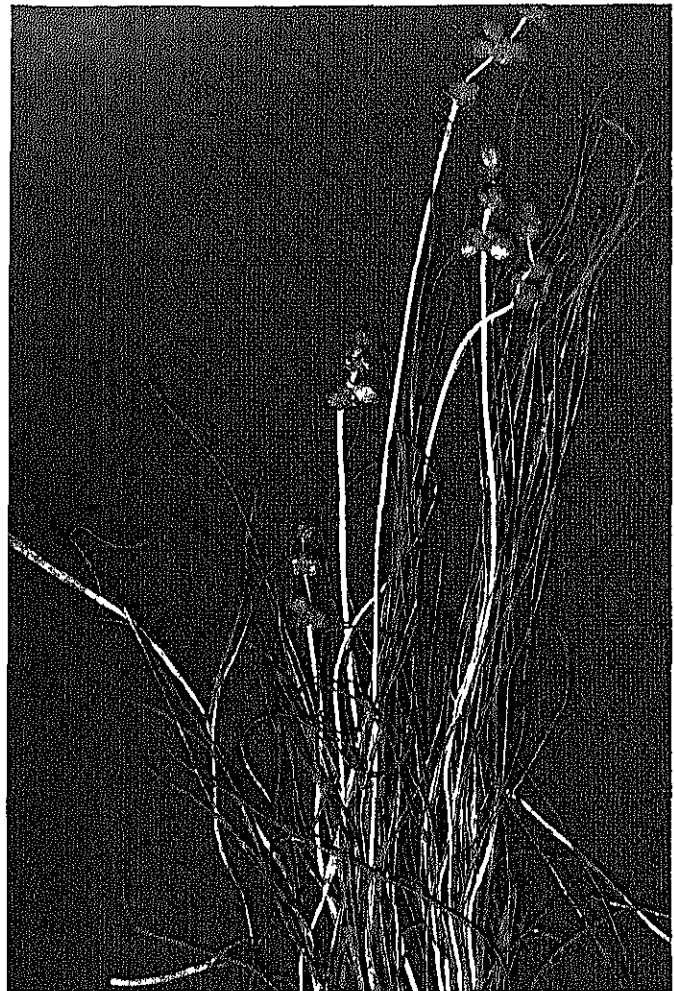
July-September

Field Marks: Only submersed leaves are present in this pondweed. The base of each leaf is attached to a stipule. This species differs from sago pondweed (*P. pectinatus*) by its less pointed leaves.





Local Notes:



Habitat: Quiet waters of ponds, lakes, and streams.

Habit: Submersed perennial with much branched rhizomes, the tips of which sometimes bear a small white tuber.

Stems: Slender, branched.

Leaves: All submersed, thread-like to linear, up to 1/6 inch wide but usually much narrower, smooth, with 3-5 veins, with a stipule attached near its base.

Flowers: Several in whorls of 2-8, the whorls crowded or separated on the stem, the stalk of the spike up to 6 inches long.

Sepals: 4, brown, up to 1/8 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, each with a superior ovary.

Fruits: Achenes obovoid, up to 1/6 inch long, up to 1/8 inch wide, with a short but prominent beak.

Notes: This is an extremely variable species with regard to leaf width and degree of congestion in the inflorescence. The achenes are eaten by waterfowl.

Floating-leaf Pondweed

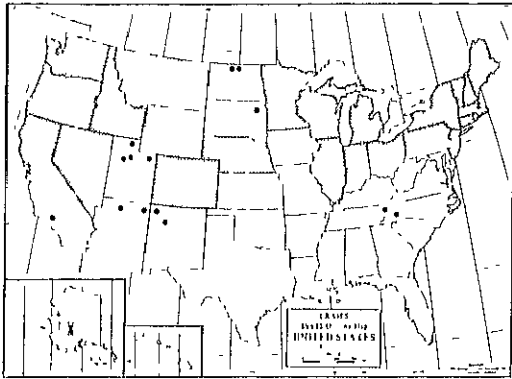
Potamogeton natans L.

Family: Pondweed (Potamogetonaceae)

June-August

Field Marks: This species has ovate to elliptic floating leaves and long, linear, submersed leaves. The achenes are 1/6-1/4 inch long.





Local Notes:



Habitat: In shallow ponds, around the edge of lakes, in slow-moving streams, often in brackish water.

Habit: Partially submersed perennial with a stout rhizome.

Stems: Slender, unbranched, not flattened, up to 1 1/2 feet long, smooth.

Leaves: Floating leaves leathery, ovate to elliptic, up to 4 inches long, up to 2 1/2 inches wide, rounded at the tip, rounded or heart-shaped at the base, without teeth, smooth, with long leaf stalks; submersed leaves linear, up to 8 inches long, up to 1/10 inch wide, smooth; stipules up to 4 inches long.

Flowers: Densely crowded into spikes, the spikes up to 2 1/2 inches long.

Sepals: 4, free from each other, greenish, up to 1/8 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, free from each other, smooth.

Fruits: Achenes ellipsoid to obovoid, up to 1/4 inch long, with a curved beak about 1/24 inch long.

Notes: The achenes are eaten by waterfowl.

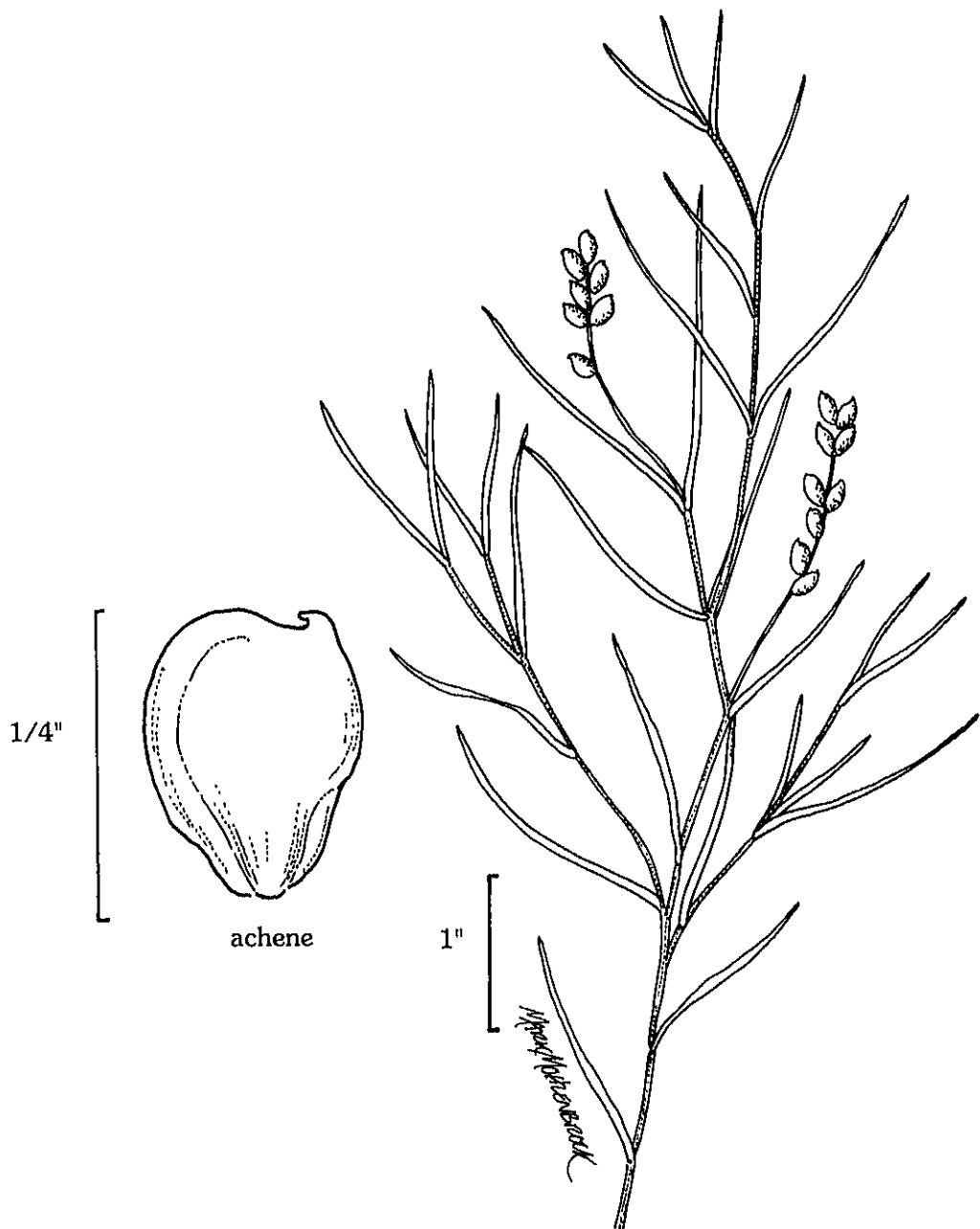
Sago Pondweed

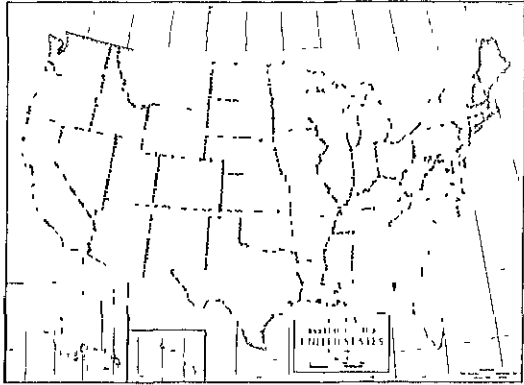
Potamogeton pectinatus L.

Family: Pondweed (Potamogetonaceae)

June-September

Field Marks: All the leaves of sago pondweed are extremely narrow, never more than 1/20 inch wide. The yellow-brown fruits have a short, pointed beak.





Local Notes:



Habitat: Shallow to somewhat deep, usually fresh water.

Habit: Submersed perennial, usually with small tubers.

Stems: Very slender, up to 1/20 inch wide, dichotomously branched, up to 2-3 feet long

Leaves: Alternate or subopposite, all submersed, very narrow, up to 4 inches long, up to 1/20 inch wide.

Flowers: Very tiny, crowded into short, slender spikes, the spikes up to 2 inches long, arranged in 2-7 whorls, each spike on thread-like stalks up to 6 inches long

Sepals: 4, greenish, bract-like.

Petals: 0.

Stamens: 4, each one attached to the base of a sepal

Pistils: 4, free from each other.

Fruits: 4 in a cluster, yellow-brown, obovoid, 1/6-1/4 inch long, with a short, pointed beak.

Notes: The small tubers of this species are starchy and are used as a source of food for waterfowl and muskrats.

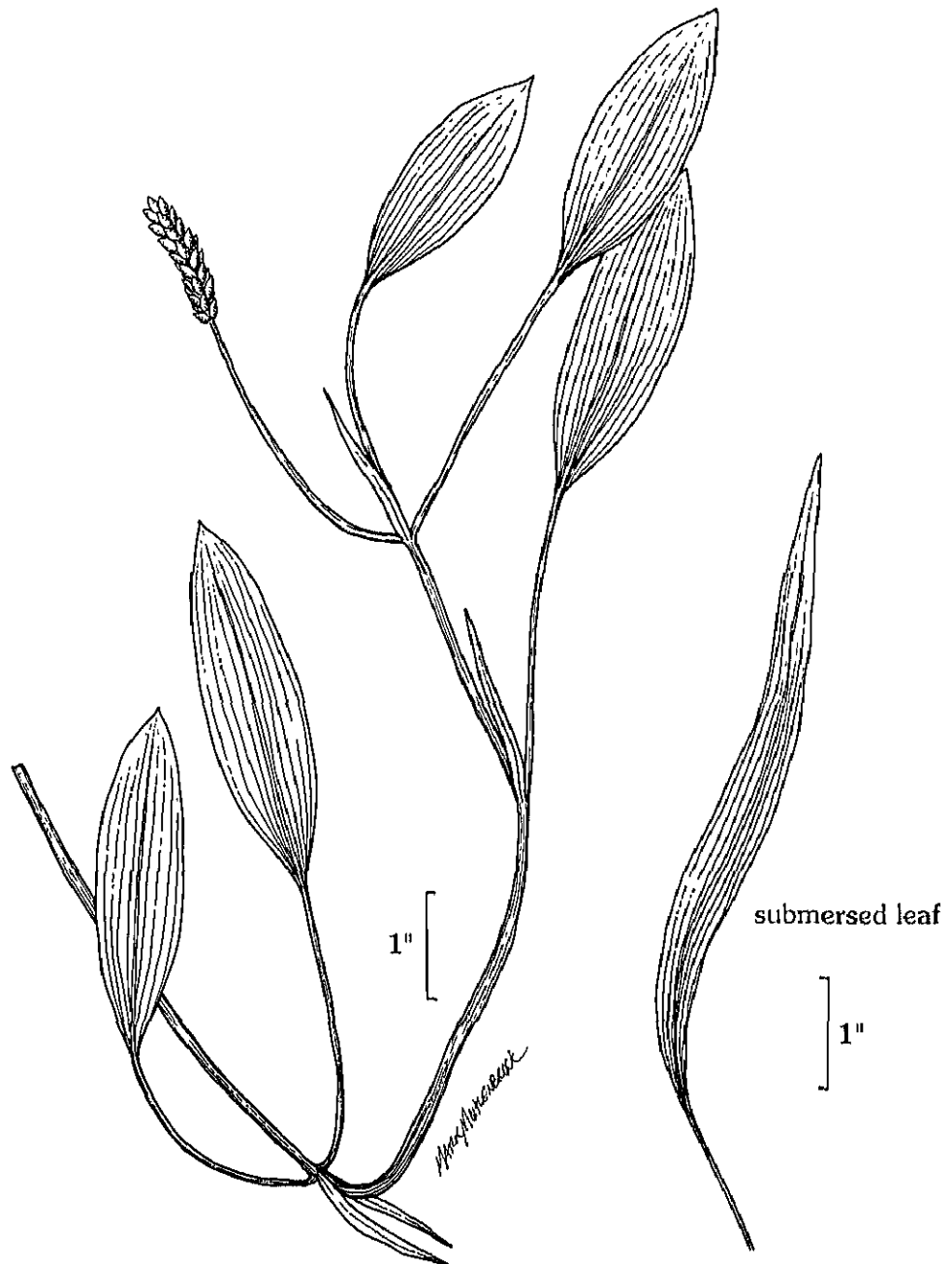
Long-leaf Pondweed

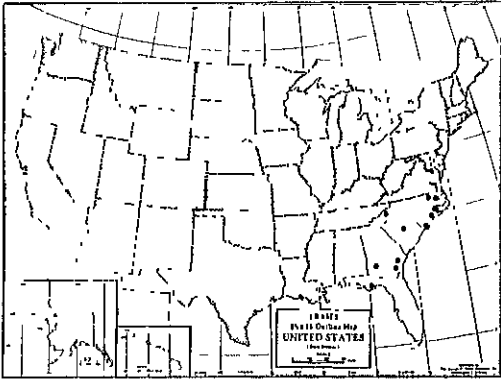
Potamogeton nodosus Poir.

Family: Pondweed (Potamogetonaceae)

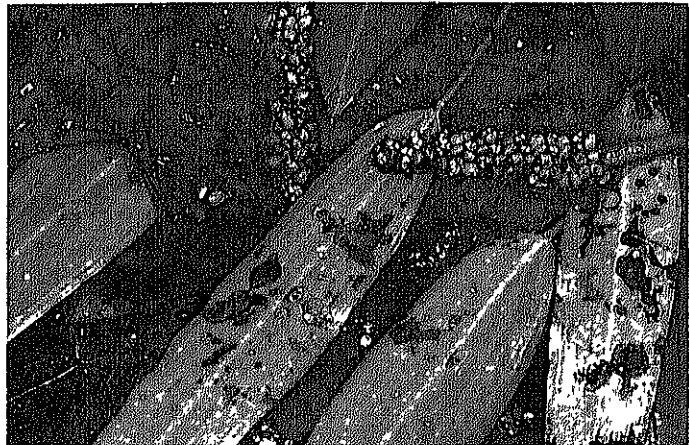
June-August

Field Marks: This pondweed has both submersed and floating leaves. The submersed leaves do not clasp the stem and are 1/2-1 1/2 inches wide and are on stalks at least 1 inch long. The elliptic to oblong floating leaves are 2-5 inches long and 1-2 inches wide with 10-20 veins.





Local Notes:



Habitat: Quiet waters of ponds, lakes, streams, and ditches.

Habit: Partially submersed perennial with spreading rhizomes.

Stems: Rather stout, branched or unbranched.

Leaves: Of two kinds. submersed leaves linear-lanceolate, 4-8 inches long, 1/2-1 1/2 inches wide, thin and very weak, with 7-15 veins, with a leaf stalk at least 1 inch long; floating leaves elliptic to oblong, 2-5 inches long, 1-2 inches wide, with 10-20 veins, on stalks up to 10 inches long.

Flowers: Several crowded into spikes, the spikes up to 2 1/2 inches long, on stout stalks up to 6 inches long.

Sepals: 4, greenish, 1/8-1/6 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, each with a superior ovary.

Fruits: Achenes obovoid, asymmetrical, up to 1/6 inch long, up to 1/8 inch wide, with a short beak at the tip.

Notes: The achenes are eaten by waterfowl.

White-stem Pondweed

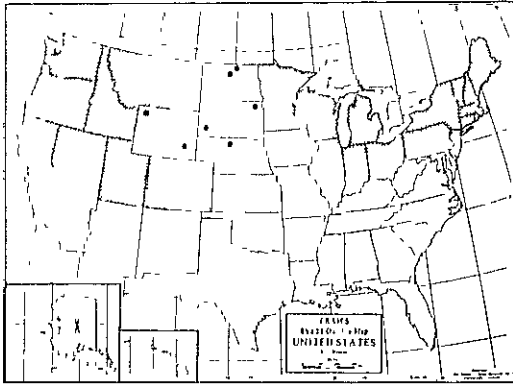
Potamogeton praelongus Wulfen

Family: Pondweed (Potamogetonaceae)

May-July

Field Marks: The leaves of this aquatic pondweed are all submersed and clasp the stem at the base. The stems are usually zigzag and the achenes are at least 1/4 inch long.





Local Notes:

Habitat: Deep water in lakes and streams

Habit: Submersed perennial with a stout rhizome.

Stems: Stout, zigzag, branched, olive-green to whitish, up to 1 foot long, smooth.

Leaves: Alternate, simple, all submersed, oblong-lanceolate, up to 10 inches long, up to 1 1/2 inches wide, more or less rounded at the tip and forming a small hood, rounded to heart-shaped at the base and clasping the stem, smooth; stipules up to 4 inches long, whitish.

Flowers: Crowded into spikes up to 2 1/2 inches long, the spikes on stalks up to 1 1/2 feet long

Sepals: 4, green, free from each other, up to 1/6 inch long

Petals: 0.

Stamens: 4.

Pistils: 4, free from each other, smooth

Fruits: Achenes obovoid, up to 1/4 inch long, up to 1/6 inch wide, smooth, with a short, persistent beak at the tip.

Notes: The achenes are eaten by waterfowl.

Potamogeton pusillus L.

July-September

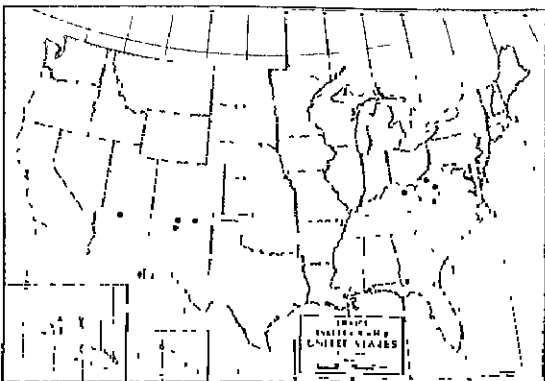
1" *Sparganium angustifolium*

1/2"

leaf with 3 veins

1"

fruiting branch



Local Notes:



Habitat: Quiet waters of lakes, ponds, and streams.

Habit: Submersed perennial with slender rhizomes.

Stems: Very slender, often thread-like, much branched.

Leaves: All submersed, about 1/12 inch wide, with 3 conspicuous veins, smooth, with 2 minute glands where leaf is attached to the stem.

Flowers: Several in whorls crowded into spikes, the spikes up to 3/4 inch long, borne on smooth stalks up to 2 1/2 inches long.

Sepals: 4, green, 1/20-1/10 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, each with a superior ovary.

Fruits: Achenes obovoid, asymmetrical, up to 1/8 inch long, with a minute beak at the tip.

Notes: This species is variable in the number of flowering and fruiting heads per plant and in the length of the stalks that bear the heads. The achenes are eaten by waterfowl.

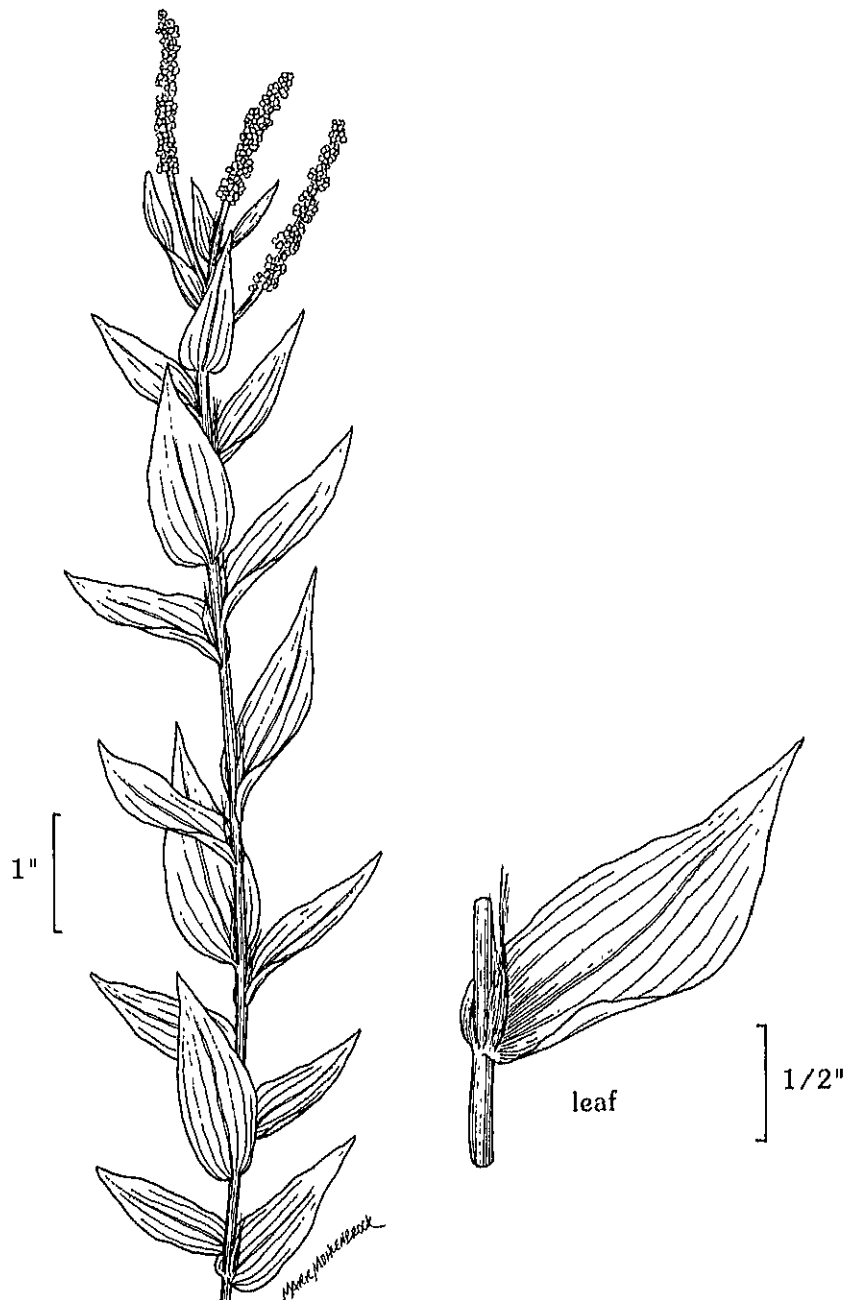
Richardson Pondweed

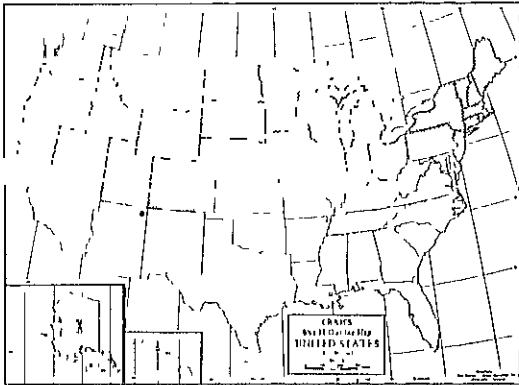
Potamogeton richardsonii (Ar. Benn.) Rydb.

Family: Pondweed (Potamogetonaceae)

June-August

Field Marks: This species is distinguished readily by its lanceolate leaves that are broadly rounded at the base and clasp the stem, its achenes that are never longer than 1/6 inch, and the stems that are not zigzag.





Local Notes:



Habitat: Shallow water of lakes and streams.

Habit: Submersed perennial herb with slender rhizomes.

Stems: Submersed, branched, rather stout, up to 2 feet long, not zigzag.

Leaves: Alternate, simple, all submersed, lanceolate to broadly lanceolate, up to 4 inches long, up to 1 inch wide, pointed at the tip, broadly rounded at the base and clasping the stem, smooth; stipules 1/2-1 inch long, shredded into white fibers.

Flowers: Crowded together into spikes, each spike up to 2 inches long on stout stalks up to 6 inches long.

Sepals: 4, green, free from each other, up to 1/6 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, each with a superior ovary.

Fruits: Achenes obovoid, up to 1/6 inch long, with a tiny erect beak at the tip.

Notes: The achenes are eaten by waterfowl.

Robbin's Pondweed

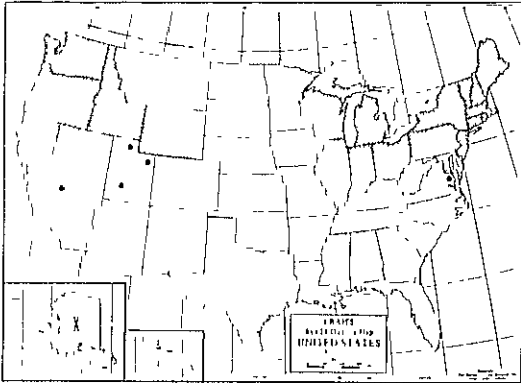
Potamogeton robbinsii Oakes

Family: Pondweed (Potamogetonaceae)

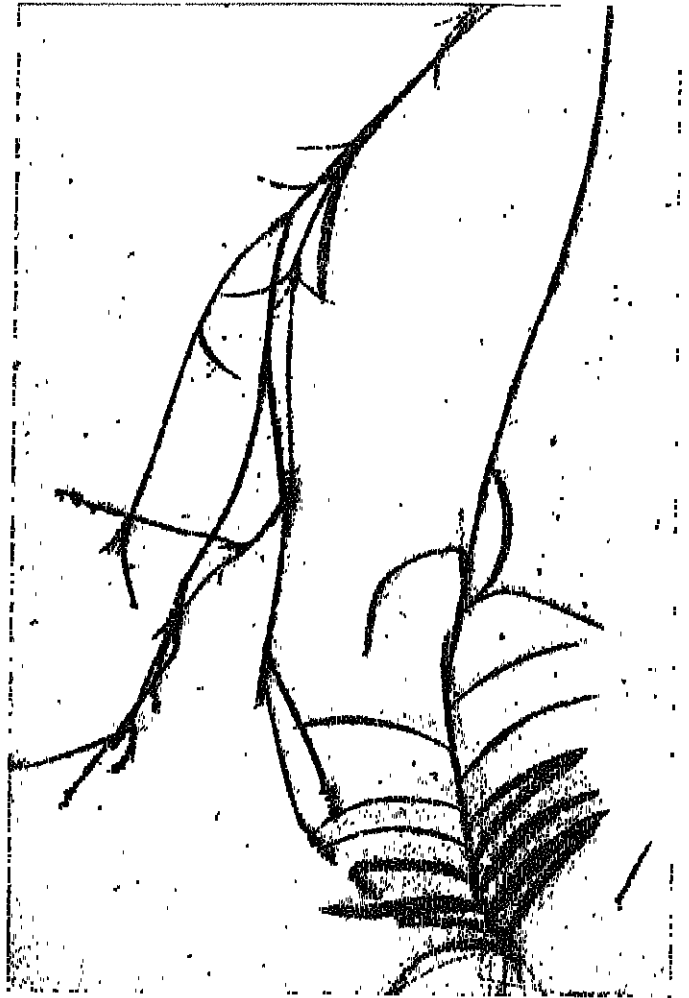
August-September

Field Marks: The leaves of this submersed pondweed are numerous, linear to linear-lanceolate and minutely toothed, at least near the tip.





Local Notes:



Habitat: In deep water of ponds, lakes, and streams.

Habit: Submersed perennial with slender, creeping rhizomes.

Stems: Rather stout, much branched, up to 2 feet long, smooth.

Leaves: Alternate, simple, all submersed, usually crowded, linear to linear-lanceolate, up to 4 inches long, up to 1/3 inch wide, pointed at the tip, united at the base with a stipule, finely toothed, at least near the tips.

Flowers: Few in stiff, interrupted spikes up to 1 inch long; stalks of spikes up to 3 inches long.

Sepals: 4, reddish to greenish yellow, free from each other, 1/16-1/12 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, free from each other, smooth.

Fruits: Achenes obovoid, up to 1/6 inch long, up to 1/8 inch wide, smooth, with the persistent curved style at the tip.

Notes: Most specimens of this species are rarely seen in flower and even more rarely in fruit. The plants provide cover for fish.

Flat-stem Pondweed

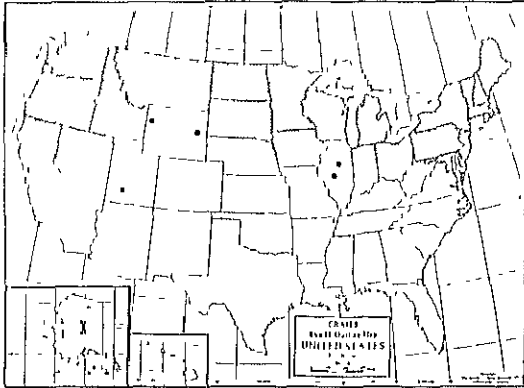
Potamogeton zosteriformis Fernald

Family: Pondweed (Potamogetonaceae)

July-September

Field Marks: This pondweed may be distinguished by its 8-inch long submersed leaves up to only 1/6 inch wide, its lack of floating leaves, and its flattened, narrowly winged stems.





Local Notes:

Habitat: Shallow water of ponds, lakes, and streams.

Habit: Submersed perennial herb with slender rhizomes.

Stems: Submersed, branched, flat, narrowly winged, up to 2 feet long.

Leaves: Alternate, simple, all submersed, linear, up to 8 inches long, up to 1/6 inch wide, rounded or pointed at the tip, sessile, finely veined, smooth; stipules up to 1 1/2 inches long.

Flowers: Crowded together into spikes, the spikes up to 1 1/2 inches long, on flattened stalks up to 4 inches long.

Sepals: 4, green, free from each other, up to 1/10 inch long.

Petals: 0.

Stamens: 4.

Pistils: 4, each with a superior ovary.

Fruits: Achenes ellipsoid, up to 1/4 inch long, with a straight or slightly curved beak at the tip

Notes: The achenes are eaten by waterfowl.

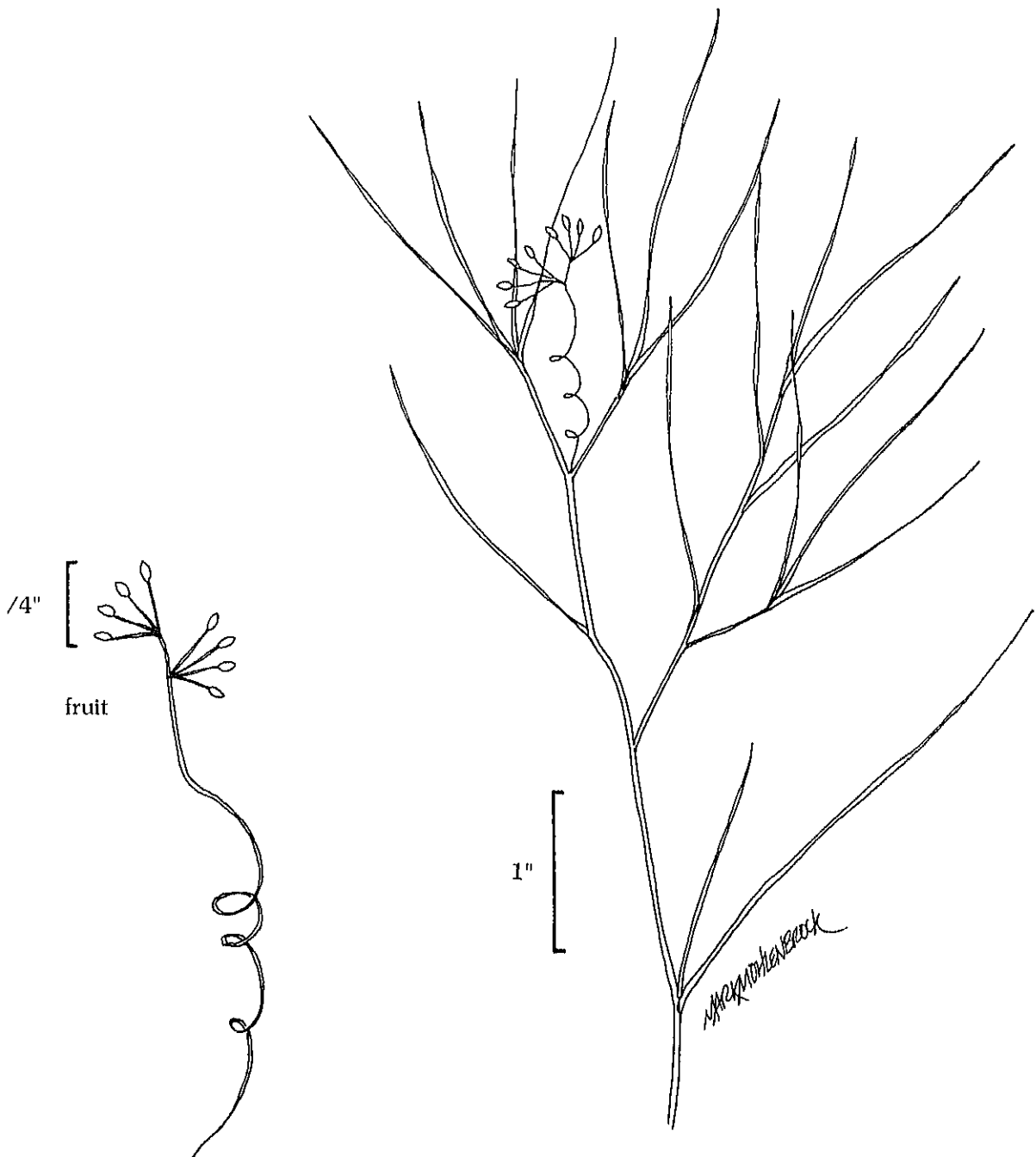
Widgeon-grass

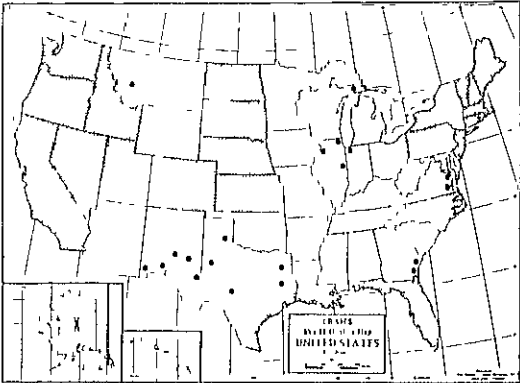
Ruppia maritima L.

Family: Pondweed (Potamogetonaceae)

April-July

Field Marks: This submersed aquatic with thread-like branches has terminal umbel-like pairs of flowers. The nut-like fruits are borne at the ends of long stalks





Local Notes:

Habitat: Alkaline or brackish water along the coasts; also in ponds, lakes, and ditches elsewhere.

Habit: Submersed perennial with creeping rhizomes.

Stems: Thread-like, much branched, up to 3 feet long, smooth.

Leaves: All submersed, alternate, thread-like to linear, up to 4 inches long, more or less rounded at the tip, with a sheathing stipule at the base.

Flowers: Usually borne in an umbel-like pair at the tip of the stem, the stalks sometimes becoming spiral.

Sepals: 0.

Petals: 0.

Stamens: 2.

Pistils: Usually 4 per flower, free from each other, borne on an elongated, slender stalk, giving the appearance of 4 flowers in a cluster rather than 1.

Fruits: 4, nut-like, ovoid, up to 1/6 inch long, usually with a short, curved beak, borne on a slender stalk 1/6-1 1/2 inches long

Notes: This species is sometimes placed in its own family, the Ruppiaceae. All parts of this plant are eaten by waterfowl. This species also provides excellent food and protection for fish.

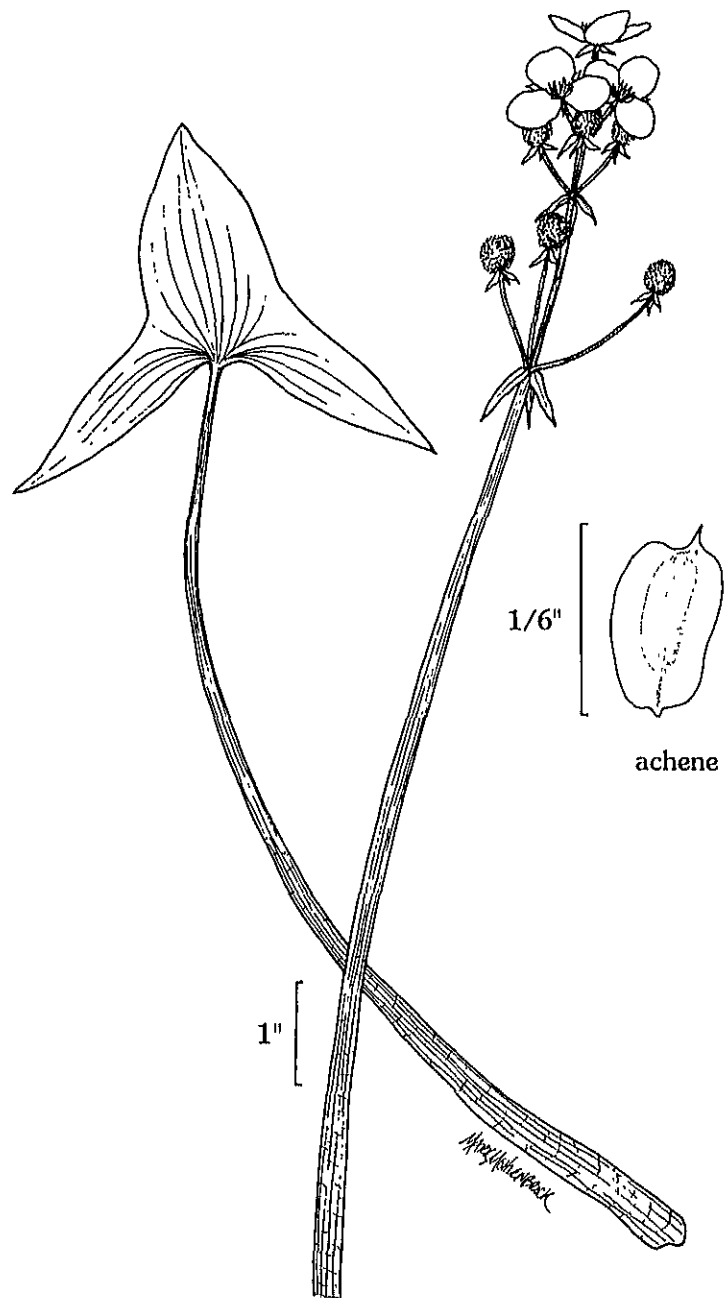
Northern Arrow-head

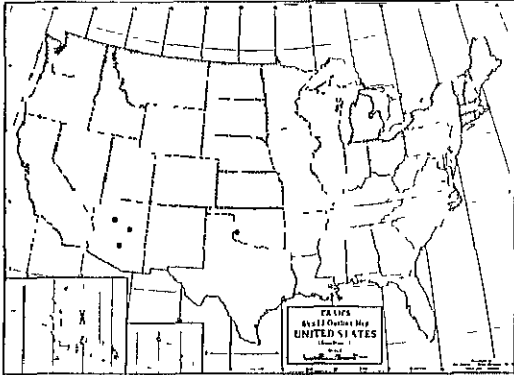
Sagittaria cuneata Sheldon

Family: Water Plantain (Alismataceae)

June-September

Field Marks: This arrow-head strongly resembles others, but can be distinguished by its angular leaf stalks and straight beak on the achene.





Local Notes:

Habitat: Around and in lakes and ponds, along streams.

Habit: Emerged or submersed perennial herb with rhizomes.

Stems: Only the flowering stem above ground, up to 3 feet tall, smooth.

Leaves: Basal, arrow-head shaped (sagittate), up to 8 inches long, the basal lobes usually shorter than the terminal lobe, smooth; leaf stalk angular.

Flowers: Male and female flowers usually borne on the same plant in whorls, the male flowers being uppermost; bracts lanceolate, pointed at the tip.

Sepals: 3, free from each other, green, ovate, up to $\frac{2}{5}$ inch long.

Petals: 3, free from each other, white, ovate, up to $\frac{4}{5}$ inch long.

Stamens: Numerous.

Pistils: Several, each with a superior ovary.

Fruits: Achenes crowded together in a spherical head, each achene up to $\frac{1}{6}$ inch long, with a tiny straight beak.

Notes: The achenes are eaten by waterfowl.

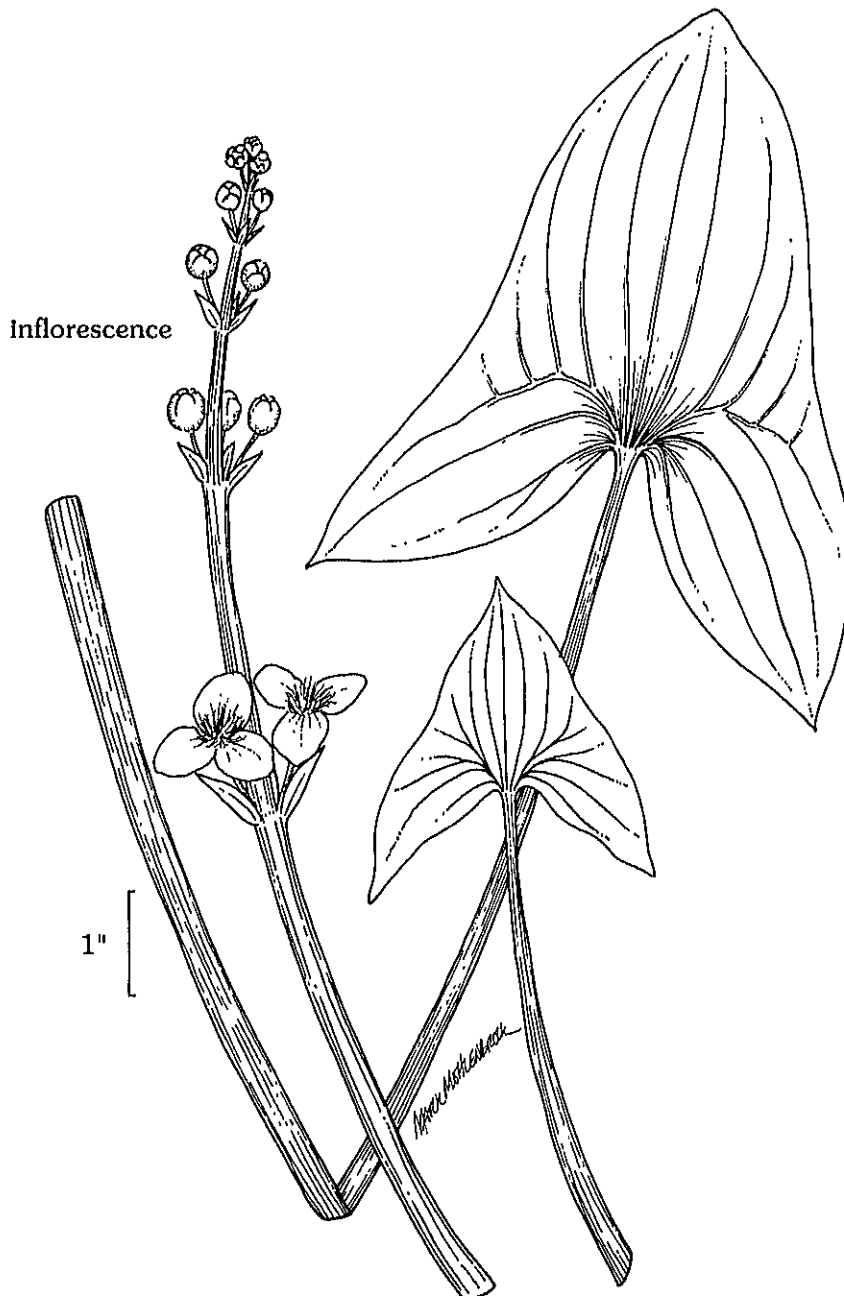
Broad-leaf Arrow-head

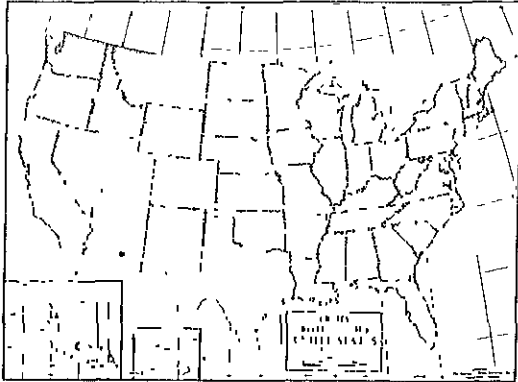
Sagittaria latifolia Willd.

Family: Water Plantain (Alismataceae)

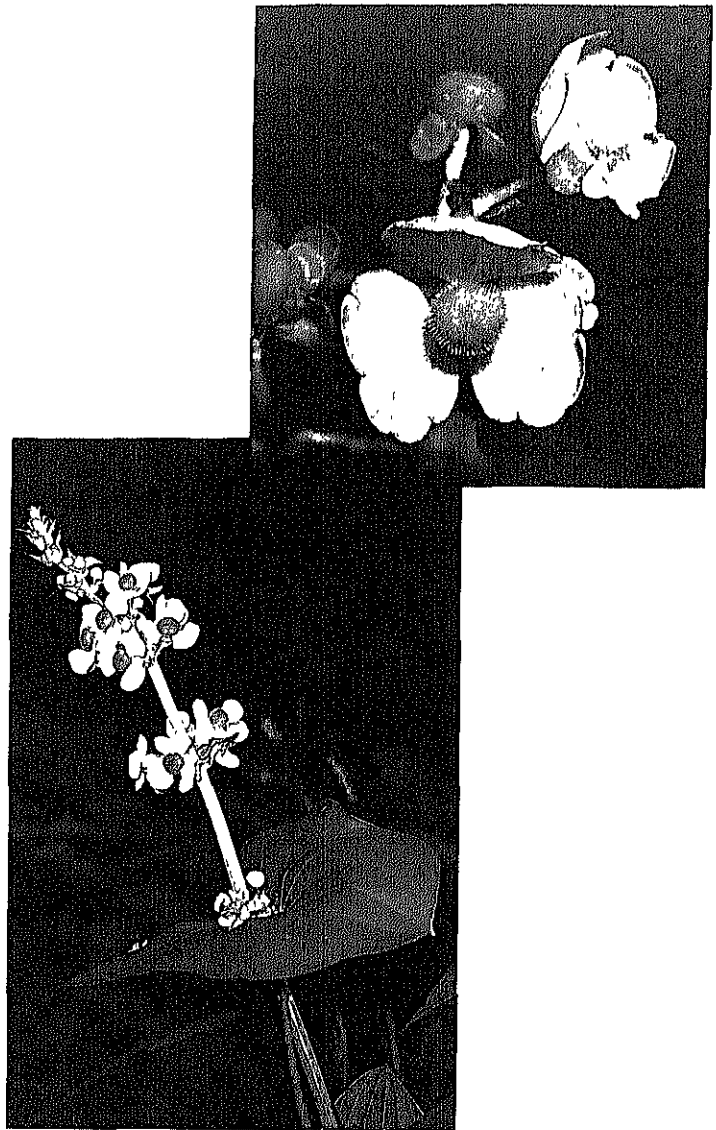
June-September

Field Marks: The leaves are usually very broad and arrowhead-shaped. This one differs from other broad-leaved species of arrowhead by its achene with a horizontal beak and the boat-shaped bracts that are either pointed or round-tipped, but not tapering to a long point.





Local Notes:



Habitat: Wet ditches, edges of lakes and ponds, often in shallow water.

Habit: Perennial herb with rhizomes.

Stems: The only stems are the rhizomes that are below the surface of the ground in terrestrial forms.

Leaves: Variable, but most of them arrowhead-shaped, up to 18 inches long, the basal triangular lobes either longer or shorter than the terminal lobe, smooth; leaf stalks angular, not round.

Flowers: Male and female flowers usually borne separately but on the same plant, the uppermost flowers usually male, the lowermost flowers usually female, each flower subtended by boat-shaped, pointed or round-tipped bracts up to 3/4 inch long.

Sepals: 3, free from each other, green, up to 1/2 inch long, eventually pointing downward.

Petals: 3, free from each other, white, up to 1 inch long.

Stamens: Numerous.

Pistils: Ovaries superior, numerous, very crowded

Fruits: Many achenes crowded into a rounded head, the head up to 1 1/2 inches long, the achenes obovoid, up to 1/5 inch long, winged, with a horizontal beak.

Notes: The achenes are eaten by waterfowl.

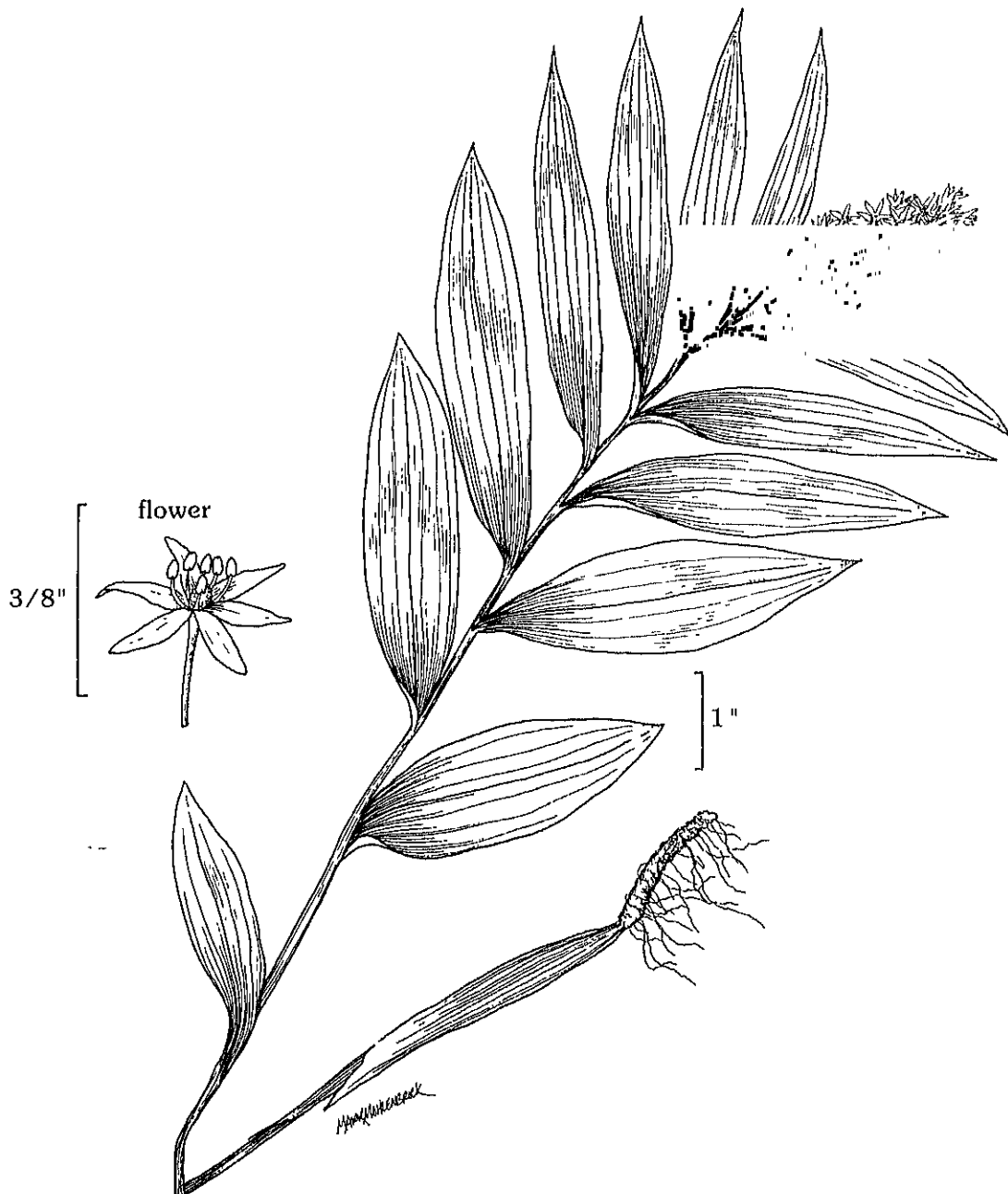
Starry False-Solomon's-seal

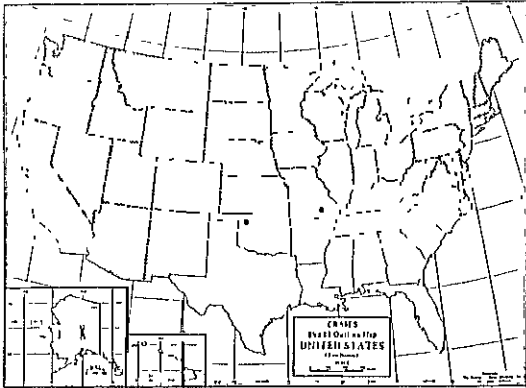
Smilacina stellata (L.) Desf.

Family: Lily (Liliaceae)

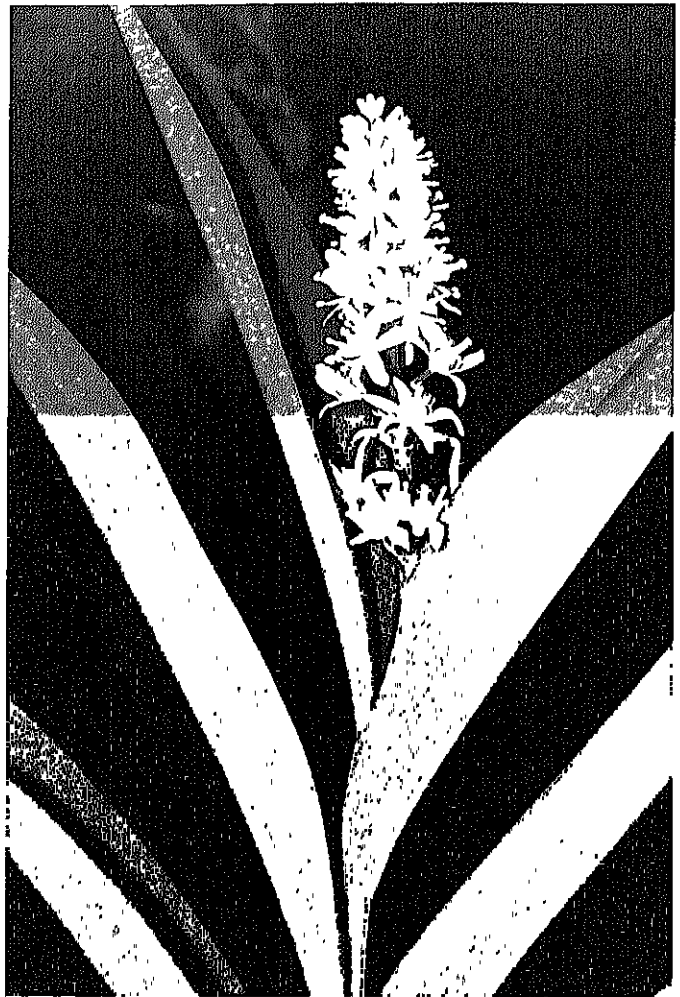
April-June

Field Marks: This species has several leaves up to 2 1/2 inches wide and a small terminal raceme of white flowers with 6 sepals and petals 1/4-1/3 inch long.





Local Notes:



Habitat: Moist areas.

Habit: Perennial herb with a rhizome.

Stems: Upright, unbranched, sometimes zigzag, up to 2 1/4 feet tall, smooth or minutely hairy.

Leaves: Alternate, simple, lanceolate to narrowly ovate, up to 6 inches long, up to 2 1/4 inches wide, pointed at the tip, rounded and sometimes clasping the stem at the base, minutely hairy on the lower surface, with several conspicuous veins.

Flowers: Several, not crowded in a terminal raceme up to 4 inches long.

Sepals and Petals: 6, similar, white, free from each other, oblong.

Stamens: 6.

Pistils: Ovary superior, smooth.

Fruits: Berries spherical, greenish yellow to reddish purple to black, 1/3-1/2 inch in diameter, with 2-3 seeds.

Notes: Several species of birds and mammals eat the berries of this species.

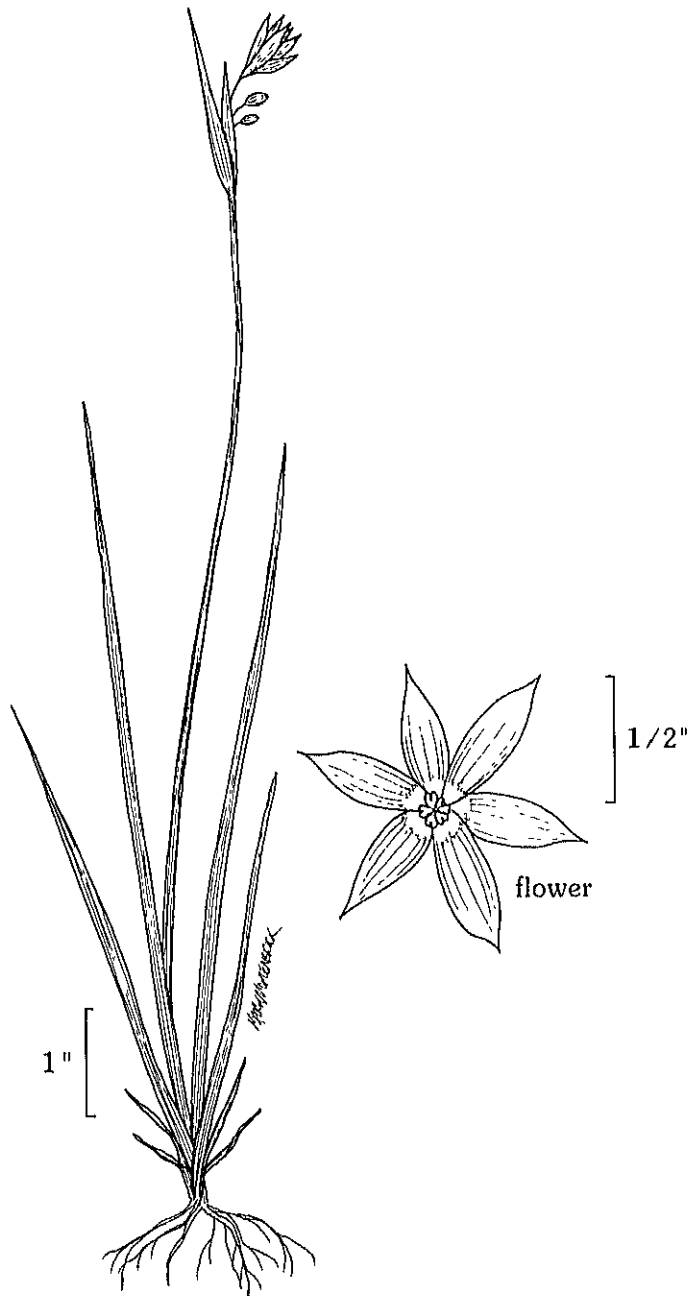
Idaho Blue-eye-grass

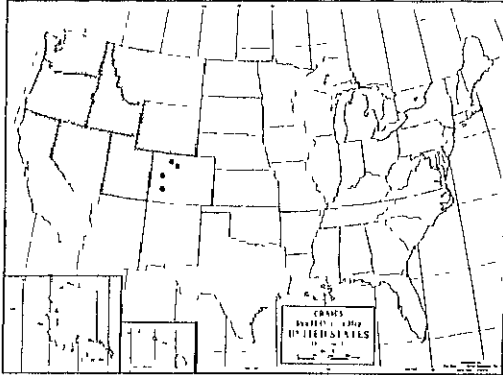
Sisyrinchium idahoense Bickn.

Family: Iris (Iridaceae)

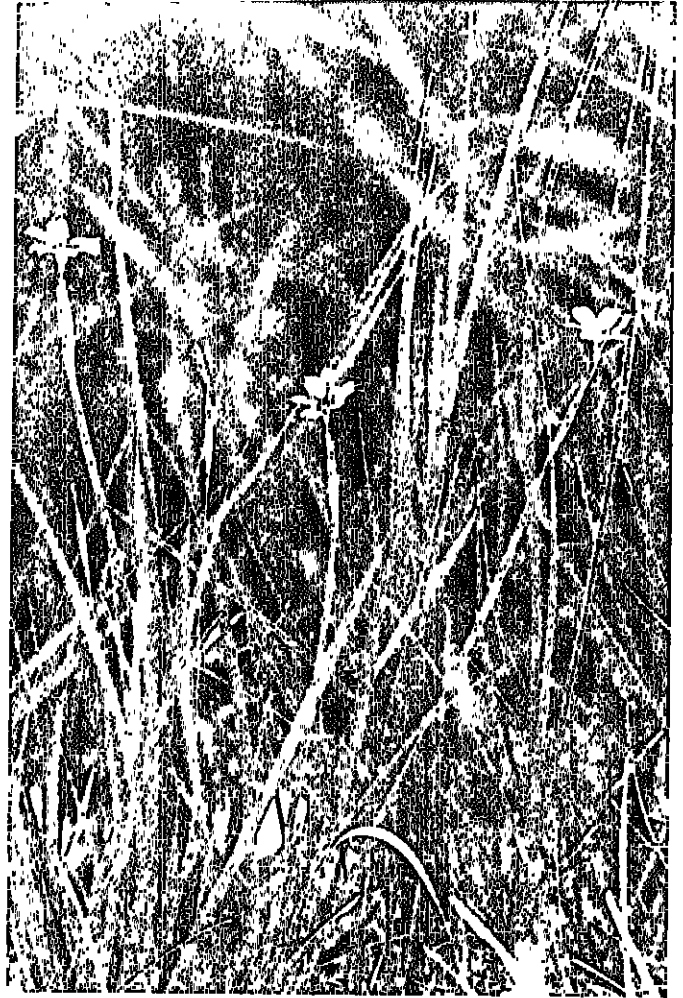
May-August

Field Marks: The 2 bracts that subtend each group of flowers are very much different in length. The outer bract is never twice as long as the inner bract. The sepals and petals are narrowly elliptic.





Local Notes:



Habitat: Wet meadows, along streams.

Habit: Perennial herb with fibrous roots.

Stems: Upright, unbranched, up to 1 3/4 feet tall, not conspicuously winged, smooth, with or without small teeth along the edge

Leaves: All or nearly all basal, elongated, flattened, shorter than the flowering stems, up to 1/6 inch wide, with or without small teeth along the edge.

Flowers: 1-few, purple or blue with a yellow center, in an umbel at the tip of the stem, the umbel subtended and partially enclosed by a pair of leafy bracts (spathes); outer bract up to 2 1/2 inches long; inner bract up to 1 1/2 inches long.

Sepals and Petals: 6, free from each other, blue or purple with a yellow base, narrowly elliptic, up to 3/4 inch long, tapering to an abrupt point at the tip.

Stamens: 3.

Pistils: Ovary inferior, glandular-hairy.

Fruits: Capsules obovoid to nearly spherical, up to 1/4 inch long; seeds spherical, up to 1/16 inch in diameter, minutely pitted.

Notes: There is considerable variation in this species, and it is sometimes difficult to distinguish from *S. montanum*.

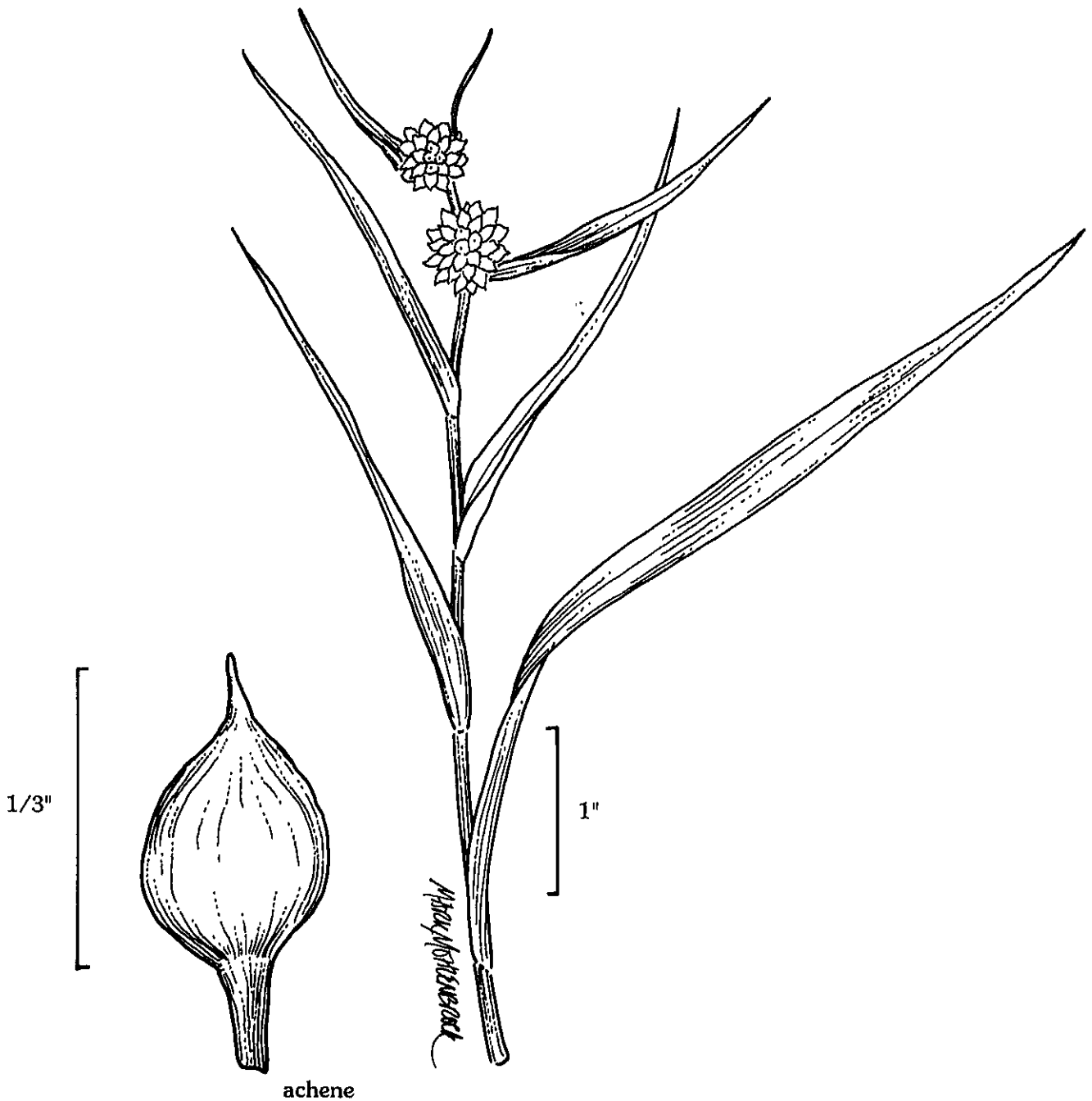
Small Burreed

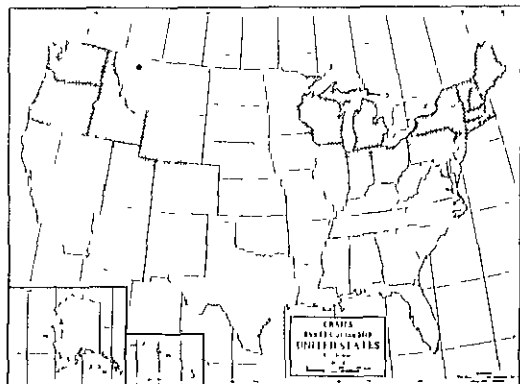
Sparganium minimum (Hartm.) Fr.

Family: Burreed (Sparganiaceae)

June-August

Field Marks: This is the tiniest of all North American species of *Sparganium*. The heads of fruiting achenes are less than 1/2 inch across, and the leaves are only about 1/3 inch wide.





Local Notes:



Habitat: Bogs, ponds, often in shallow standing water.

Habit: Floating or emergent perennial with slender, creeping rhizomes

Stems: Slender, floating or upright if emergent, smooth, up to 2 feet long but usually shorter, particularly if emergent.

Leaves: Flat, dark green, alternate, sheathing at the base, tapering to a point at the tip, usually up to 6 inches long, up to 1/3 inch wide, smooth

Flowers: Male and female borne separately in spherical heads on the same plant, the male head solitary, terminal, 1/4-1/3 inch in diameter, the female heads 1-3, up to nearly 1/2 inch in diameter.

Sepals: 0.

Petals: 0.

Stamens: Several, crowded together into a dense, spherical head, with whitish filaments.

Pistils: Several, crowded together into a dense, spherical head.

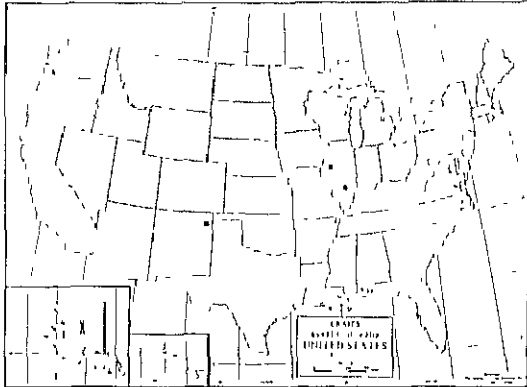
Fruits: Achenes several, crowded together into a spherical head up to nearly 1/2 inch across, each achene smooth, up to 1/3 inch long, with a very short beak and very short stalk.

Notes: The achenes are eaten by waterfowl

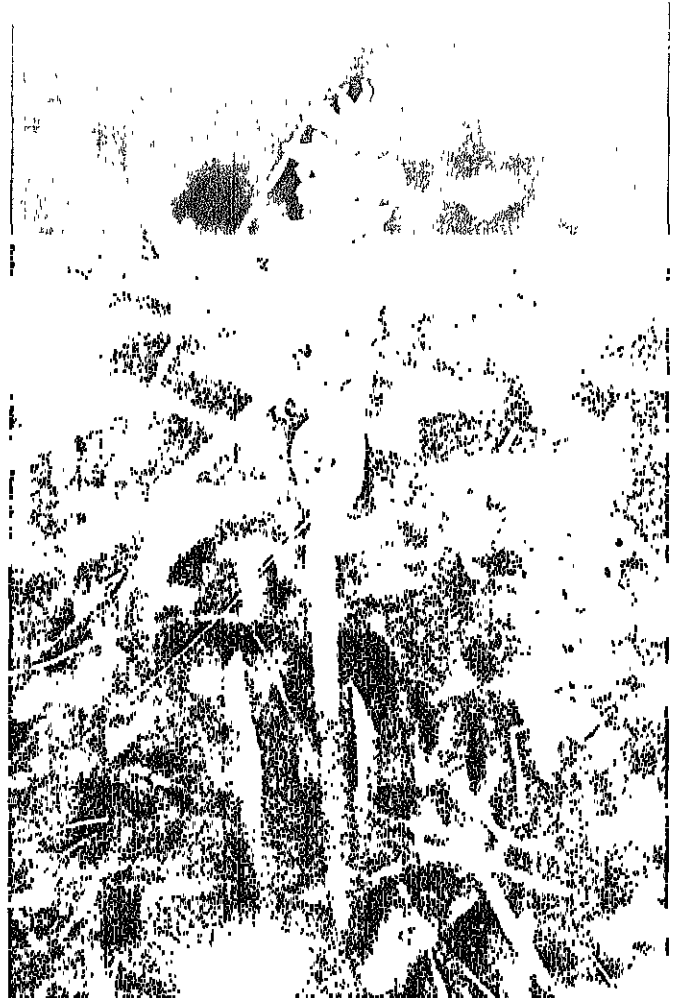
Spiranthes romanzoffiana Cham.

July-September

A detailed botanical line drawing of a plant. The main illustration shows a plant with a basal rosette of several long, narrow, lanceolate leaves. A single, slender, upright stem rises from the center of the rosette, bearing a dense, elongated spike of small flowers at its apex. A vertical scale bar to the left of the stem is labeled "1 inch". To the right of the main plant, there is a magnified view of a single flower. This flower is shown in profile, revealing its structure: a large, rounded, tubular corolla that flares into five pointed lobes at the mouth. A vertical scale bar next to the flower is labeled "1/4 inch". The word "flower" is written to the right of the magnified flower. The artist's signature, "H. B. K. 1845", is visible in the lower left corner of the main plant drawing.



Local Notes:



Habitat: Along streams, in bogs, mountain meadows.

Habit: Perennial herb with a cluster of thickened, fleshy roots

Stems: Upright, unbranched, up to 1 foot tall, smooth or glandular-hairy

Leaves: Alternate, simple, linear-lanceolate to oblanceolate, up to 4 inches long, up to 1/2 inch wide, without teeth, smooth or glandular-hairy.

Flowers: Many crowded into a twisted, terminal spike, the spike up to 4 inches long; bracts lanceolate, longer than the flowers

Sepals: 3, white, cream, or greenish white, grouped with 2 of the 3 petals to form a hood 1/3-1/2 inch long, lateral sepals turned downward at the tip.

Petals: 3, white, cream, or greenish white, 2 of them grouped with the 3 sepals to form a hood, the other forming an oblong lip that turns down abruptly

Stamens: 3.

Pistils: Ovary inferior, smooth

Fruits: Capsules ellipsoid, smooth, up to 1/4 inch long.

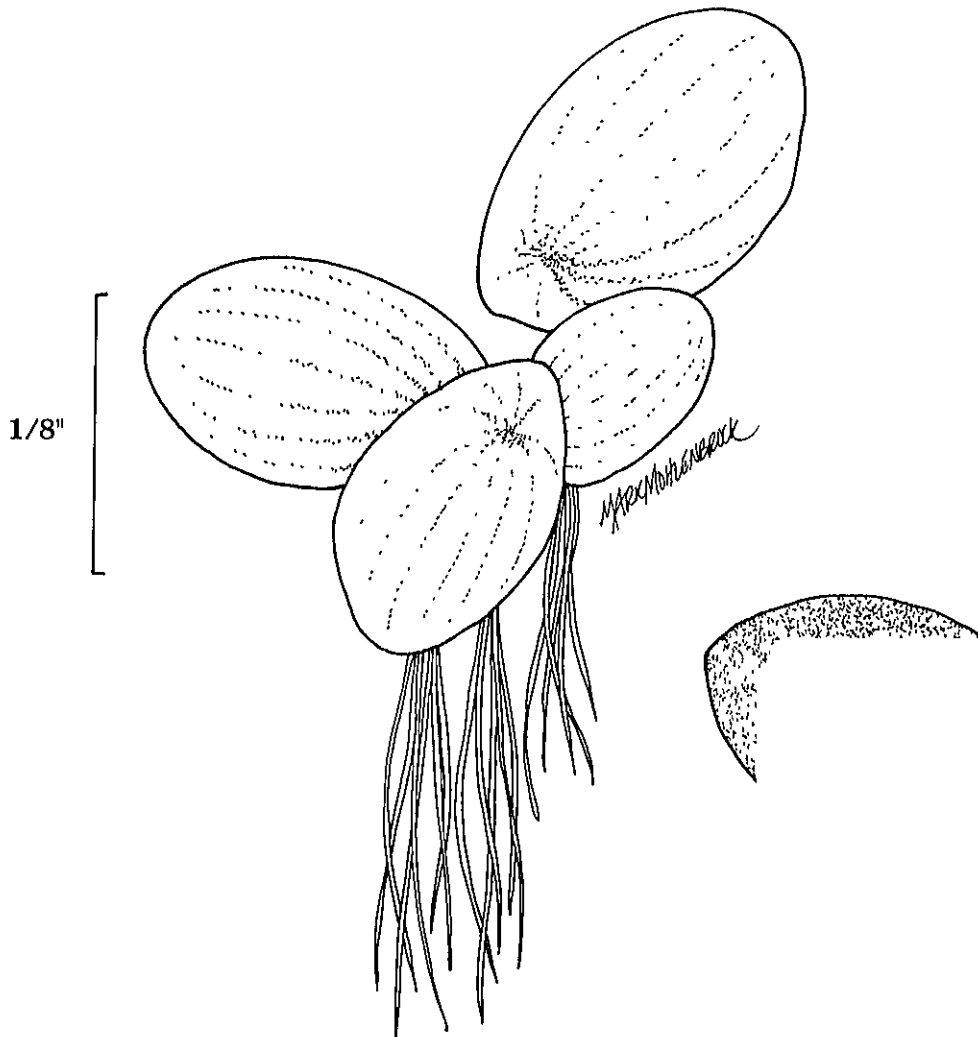
Greater Duckweed

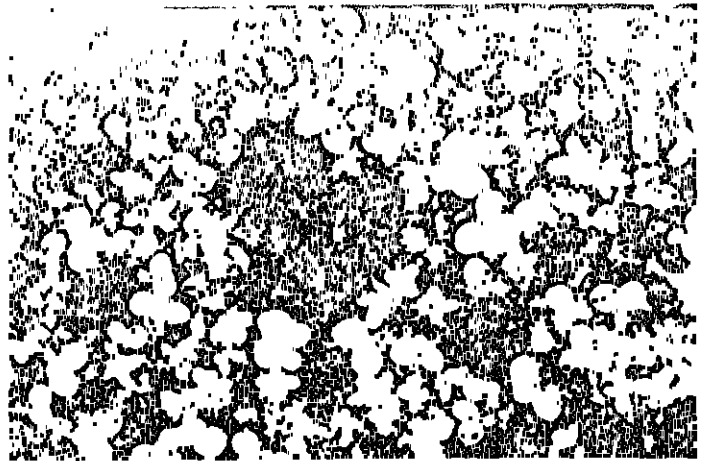
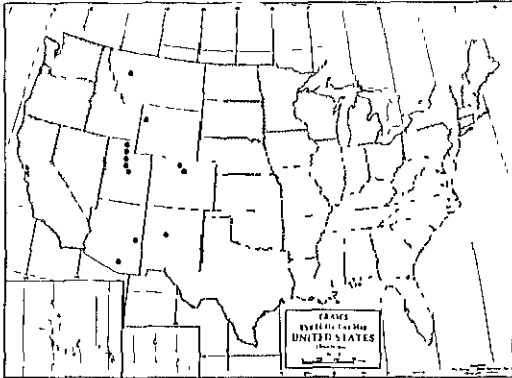
Spirodela polyrhiza (L.) Schleid.

Family: Duckweed (Lemnaceae)

June-September

Field Marks: *Spirodela polyrhiza* is a duckweed with several roots per frond and with 5 or more distinct veins.





Local Notes:

Habitat: Quiet waters of lakes and ponds, in marshes and slow streams.

Habit: Floating plant on the surface of water.

Stems: 0.

Leaves: Single fronds or fronds cohering in clusters of 2-5, up to 1/3 inch long, up to 1/4 inch wide, green on the upper surface, usually red-purple on the lower surface, with at least 5 distinct veins, smooth

Flowers: Rarely formed, if present, the minute male and female flowers borne in pouches known as spathes, male flowers usually 2 per pouch.

Sepals: 0.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior.

Fruits: Rarely formed; if present, with a minute wing. Asexual reproductive buds, called turions, are the chief method of reproduction

Notes: Like most duckweeds, this one is a source of food for waterfowl.

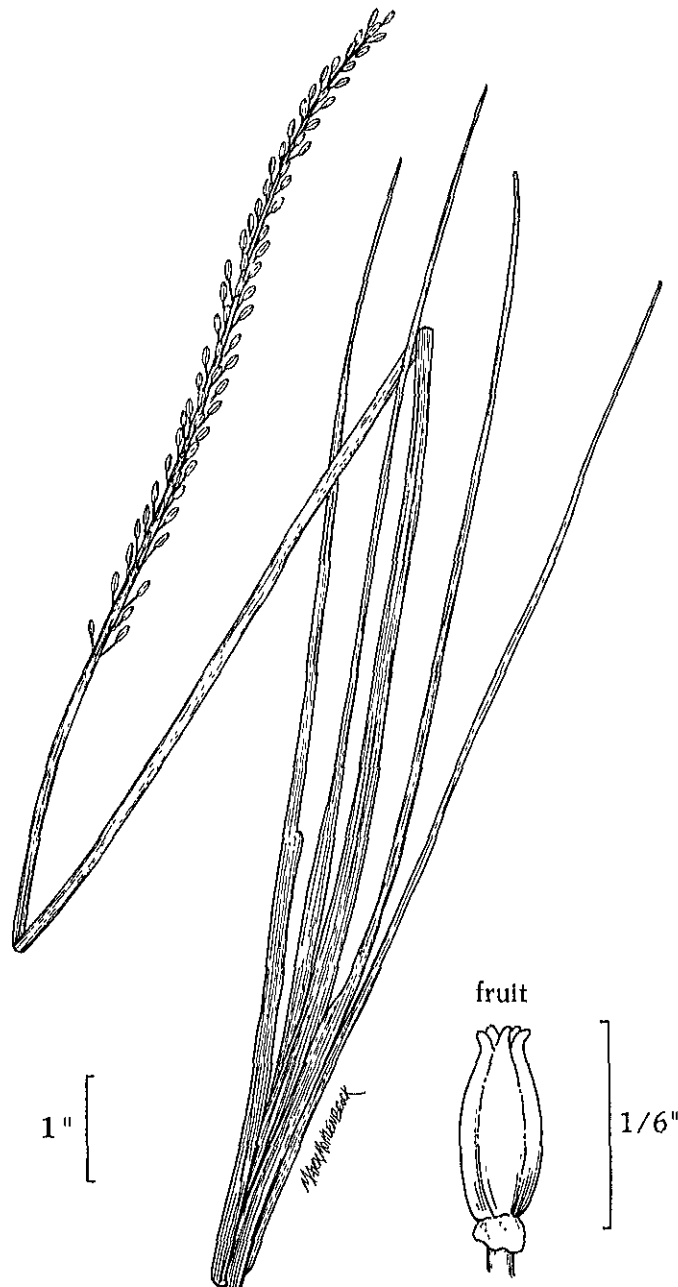
Seaside Arrow-grass

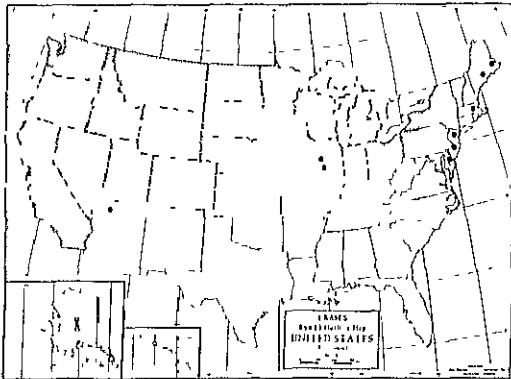
Triglochin maritimum L.

Family: Arrow-grass (Juncaginaceae)

May-August

Field Marks: This species is recognized by its long, narrow basal leaves with a conspicuous ligule at the base, its slender spike-like raceme of greenish yellow, 3-parted flowers, and its 6 free pistils in each flower.





Local Notes:



Habitat: Marshes, wet meadows, particularly in alkaline areas.

Habit: Perennial herb with a stout rhizome.

Stems: Aerial stem leafless, up to 2 feet long, bearing only a terminal spike-like raceme of flowers, smooth.

Leaves: All basal, elongated, linear, up to 1 foot long, usually about 1/2 as long as the plant, up to 1/6 inch wide, pointed at the tip, smooth; ligule up to 1/4 inch long.

Flowers: Numerous in a terminal, spike-like raceme, the raceme up to 10 inches long; bracts absent; flower stalks slender, up to 1/4 inch long.

Sepals: 3, free from each other, greenish yellow, up to 1/10 inch long.

Petals: 3, free from each other, greenish yellow, up to 1/10 inch long.

Stamens: 6.

Pistils: 6 per flower, united by their inner faces, each with a superior ovary.

Fruits: Follicles 6, united by their inner faces, oblongoid, up to 1/6 inch long.

Notes: This species, if eaten, is poisonous to livestock.

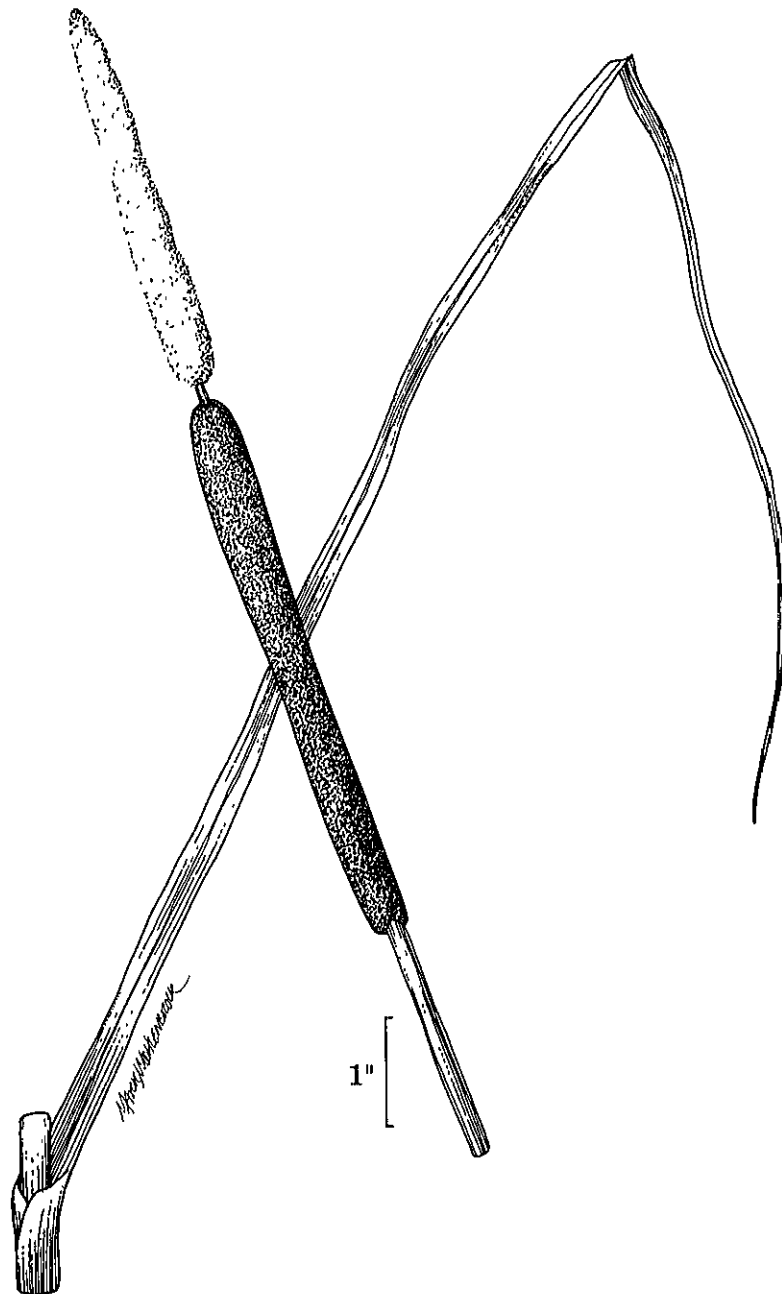
Narrow-leaf Cattail

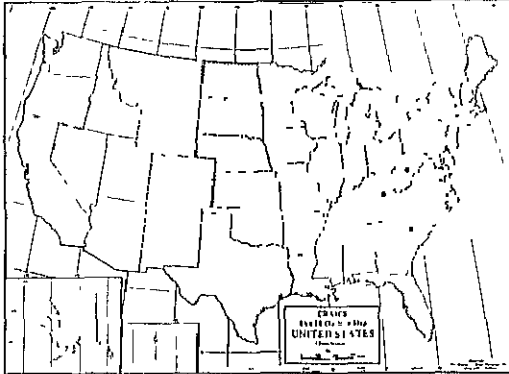
Typha angustifolia L.

Family: Cattail (Typhaceae)

June-August

Field Marks: This species has up to 8 leaves per stem, the leaves usually less than 1/2 inch wide. The female spike is usually less than 1 inch thick





Local Notes:

Habitat: Marshes, in and along streams, around lakes and ponds.

Habit: Rather slender perennial herb with slender branching rhizomes.

Stems: Upright, up to 5 feet tall, smooth.

Leaves: Alternate, narrow, elongated, up to 8 per stem, usually less than 1/2 inch wide.

Flowers: Male and female borne separately in spikes on the same plant; male spike formed directly above female spike but usually separated from the female spike by a short interval, much narrower than the female spike, and falling away after pollen is shed, pale brown; female spike up to 8 inches long, usually less than 1 inch thick, dark brown.

Sepals: 0.

Petals: 0.

Stamens: 2-5 per flower.

Pistils: 1 per flower, the ovary superior.

Fruits: Achenes ellipsoid, about 1/20 inch long, subtended by fine hairs.

Notes: Although the male spike is often separated from the female spike by a short interval, this is not always the case. The achenes are eaten by waterfowl.

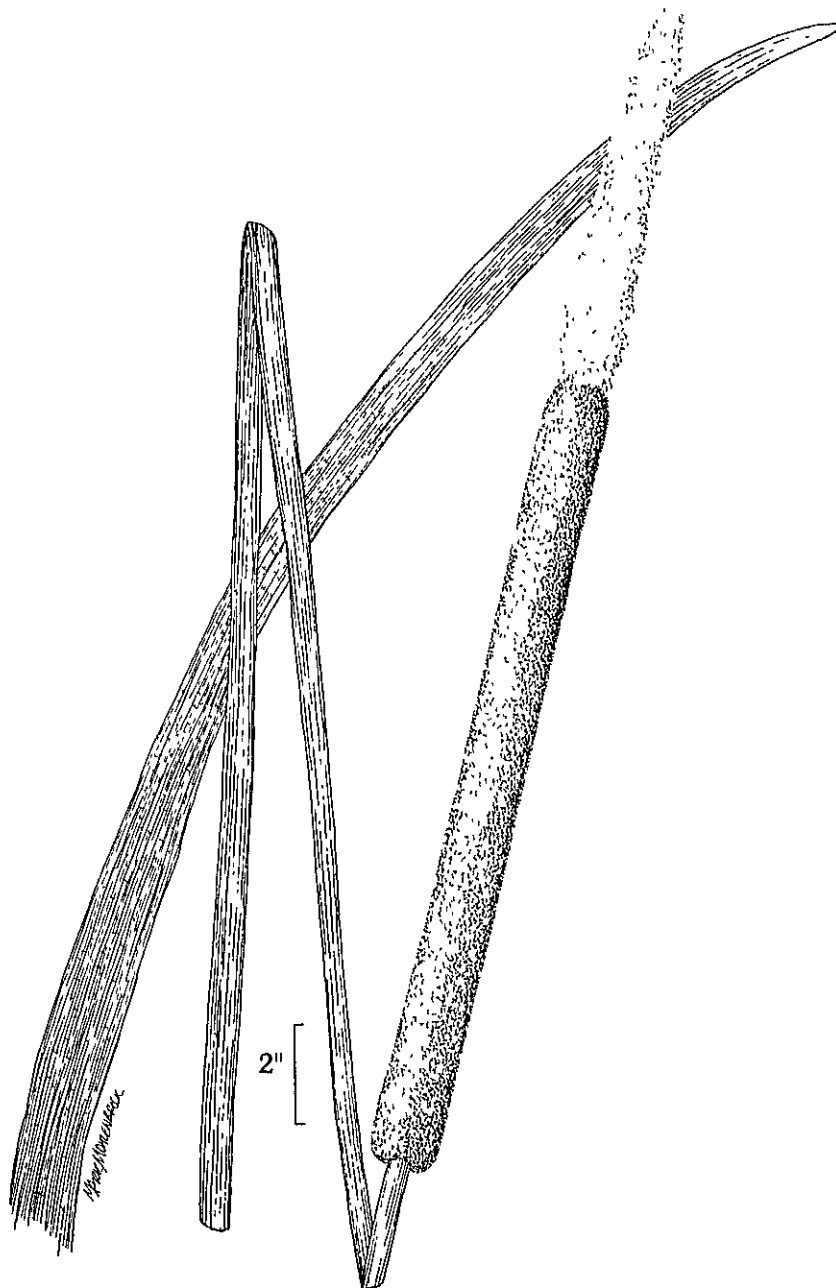
Broad-leaf Cattail

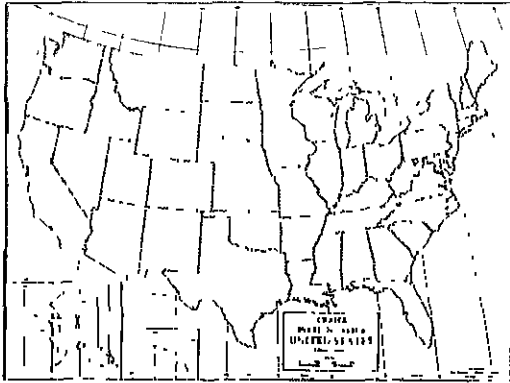
Typha latifolia L.

Family: Cattail (Typhaceae)

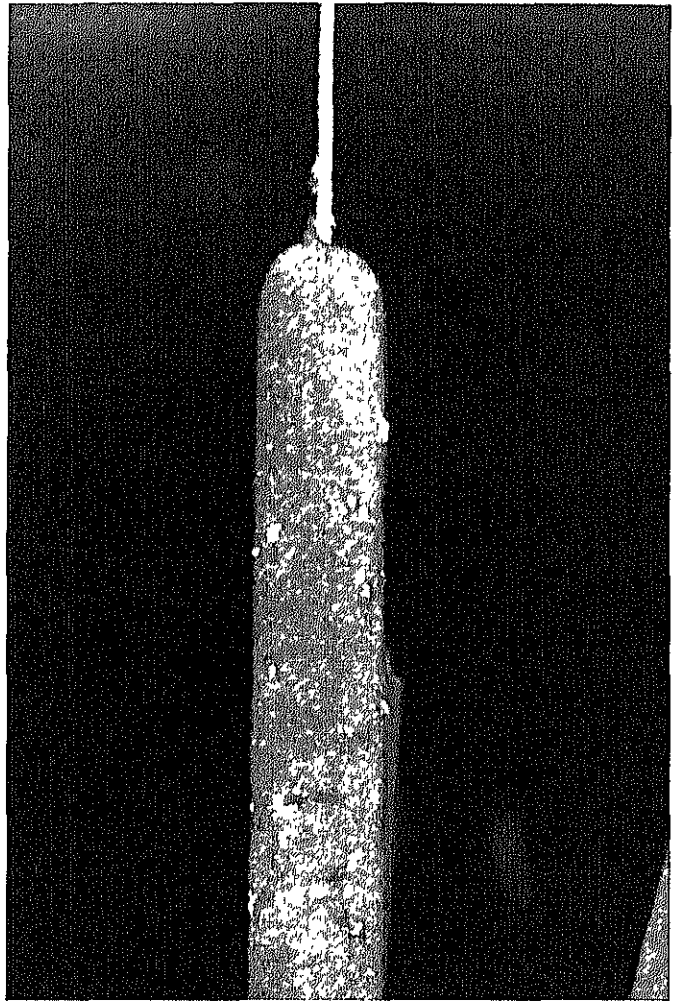
June-August

Field Marks: This species has at least 8 leaves per stem, the leaves usually more than 1/2 inch wide. The female spike is usually at least 1 inch thick





Local Notes:



Habitat: Marshes, in and along streams, around lakes and ponds.

Habit: Coarse perennial herb with stout, branching rhizomes.

Stems: Upright, up to 10 feet tall, smooth.

Leaves: Alternate, elongated, at least 8 per stem, some of them usually at least 1 inch wide, always at least 1/2 inch wide.

Flowers: Male and female borne separately in spikes on the same plant; male spike formed directly above the female spike and falling away after pollen is shed, pale brown; female spike thick, up to 10 inches long, up to 1 1/2 inches thick, dark brown.

Sepals: 0.

Petals: 0.

Stamens: 2-5 per flower.

Pistils: 1 per flower, the ovary superior.

Fruits: Achenes ellipsoid, about 1/20 inch long, subtended by fine hairs.

Notes: There is considerable intergradation and probable hybridization between cattails so that intermediate specimens are often encountered. The achenes are eaten by waterfowl. The leaves are used by muskrats for building nests.

Wild-Celery

Vallisneria americana Michx.

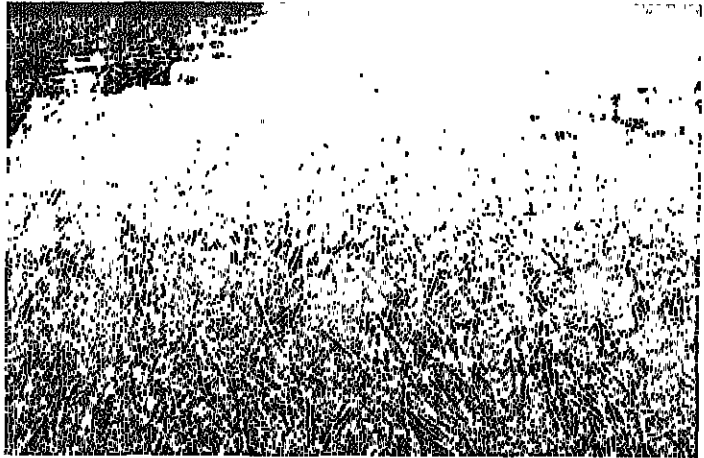
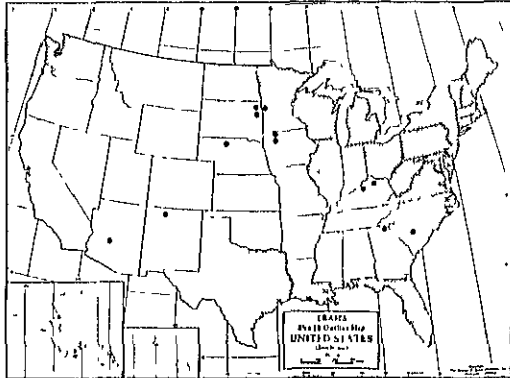
Family: Frog's-bit (Hydrocharitaceae)

July-September

Field Marks: This distinctive plant is recognized by its long, submerged, ribbon-like leaves that are minutely toothed along the edges



female flower



Local Notes:

Habitat: Shallow waters of lakes and streams.

Habit: Aquatic perennial herb with stolons.

Stems: Slender, smooth stolons.

Leaves: Elongated and ribbon-like, up to 3 feet long, up to 1/3 inch wide, without hairs, minutely toothed along the edges, partially septate.

Flowers: Male and female flowers borne on separate plants; male flowers numerous, crowded, subtended by a bract (spathe), breaking free while in bud and floating to the water surface on a long stalk before opening; female flowers solitary and sessile in a tubular spathe.

Sepals: 3, free from each other, greenish, ovate, pointed at the tip.

Petals: 1 in the male flower, smaller than the sepals; 3 in the female flower, nearly transparent.

Stamens: 2, the filaments united; a third sterile stamen is present, resembling a petal.

Pistils: Ovary inferior; stigmas 3.

Fruits: Indehiscent, ripening under water as the stalk becomes coiled and pulls the fruit below the water surface; seeds with conspicuous cross-markings.

Notes: This species is sometimes known as eelgrass. It has the ability to clog up shallow water when it develops into dense colonies. The leaves provide cover for fish. There is an apparent erroneous report of this plant from Colorado.

Veratrum californicum E.M. Durand

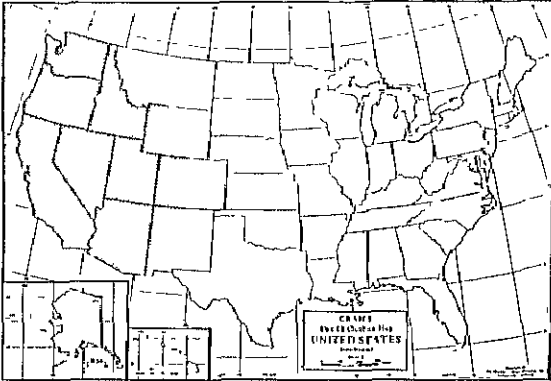
June-August

flower

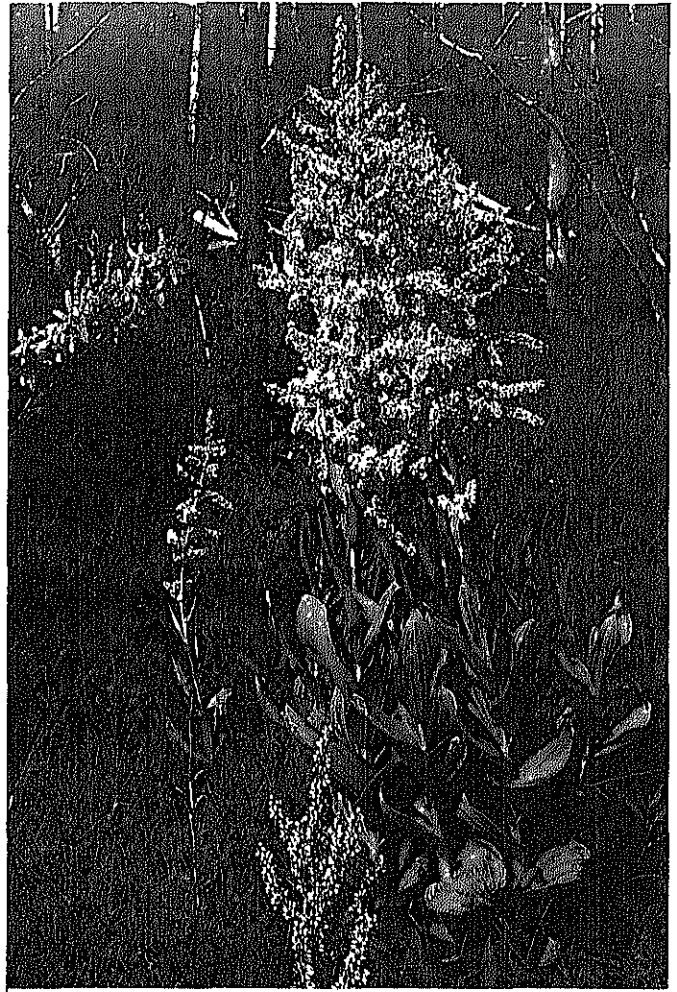
1/4"

3"

Alfred Rehder



Local Notes:



Habitat: Along streams, around lakes, in wet meadows.

Habit: Coarse perennial herb with short, thick rhizomes.

Stems: Upright, stout, unbranched except in the inflorescence, smooth or hairy in the inflorescence, up to 8 feet tall.

Leaves: Alternate, simple, broadly elliptic to ovate, up to 15 inches long, up to 8 inches wide, hairy, with conspicuous veins, pointed or rounded at the tip, rounded and sometimes clasping the stem at the base.

Flowers: Many crowded into an erect, terminal panicle, the panicle up to 2 feet long; flower stalks up to 1/4 inch long.

Sepals and Petals: 6, similar, white or greenish white, lanceolate to elliptic, up to 3/4 inch long, united below.

Stamens: 6.

Pistils: Ovary superior; styles 3.

Fruits: Capsules ovoid, up to 1 1/2 inches long, smooth, containing many pale, flat seeds up to 3/4 inch long.

Notes: Some of the flowers may only have stamens, while others may have both stamens and pistils. The stems and leaves are sometimes browsed by larger mammals.

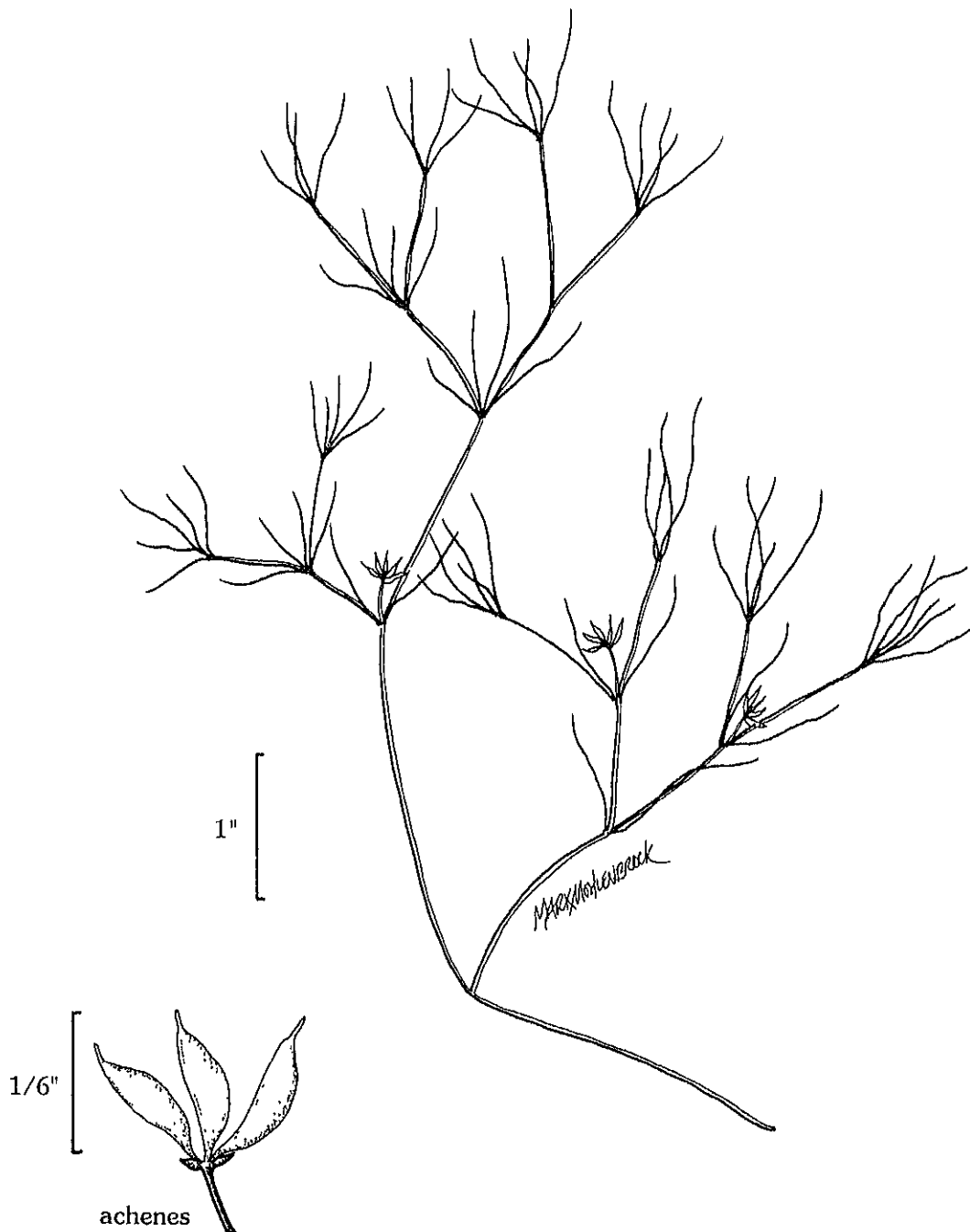
Horned Pondweed

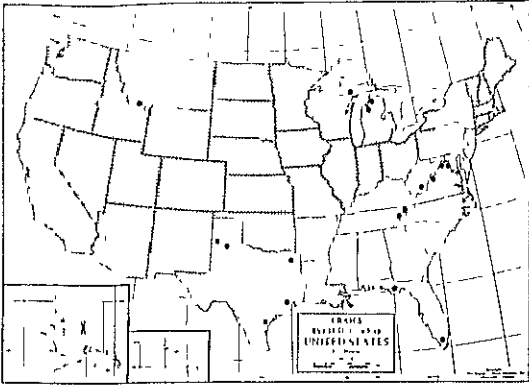
Zannichellia palustris L.

Family: Pondweed (Potamogetonaceae)

March-November

Field Marks: This submersed aquatic with very slender stems and opposite leaves has conspicuously beaked achenes





Local Notes:

Habitat: Fresh water or brackish lakes, ponds, and streams.

Habit: Submersed perennial with creeping rhizomes.

Stems: Thread-like, branched, up to 1 1/2 feet long, smooth

Leaves: All submersed, opposite, thread-like, up to 3 1/2 inches long, pointed at the tip, with a transparent sheath at the base.

Flowers: Male and female flowers borne separately in the same leaf axils.

Sepals: 0, although 3 transparent scales may subtend the male flower and 1 scale usually subtends the female flower

Petals: 0

Stamens: 1.

Pistils: 2-6, free from each other.

Fruits: 2-6 achenes, oblong, flattened, up to 1/6 inch long, with a slender beak up to 1/8 inch long, each achene often on a very short stalk.

Notes: This species is sometimes placed in its own family, the Zannichelliaceae. The entire plant may be utilized as food for waterfowl and some fish.

GROUP 5

**Trees and Shrubs,
including Woody Vines**

GROUP 5

**Trees and Shrubs,
including Woody Vines**

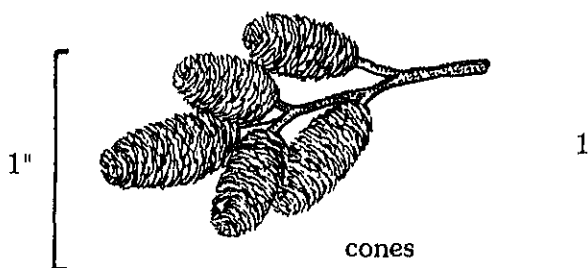
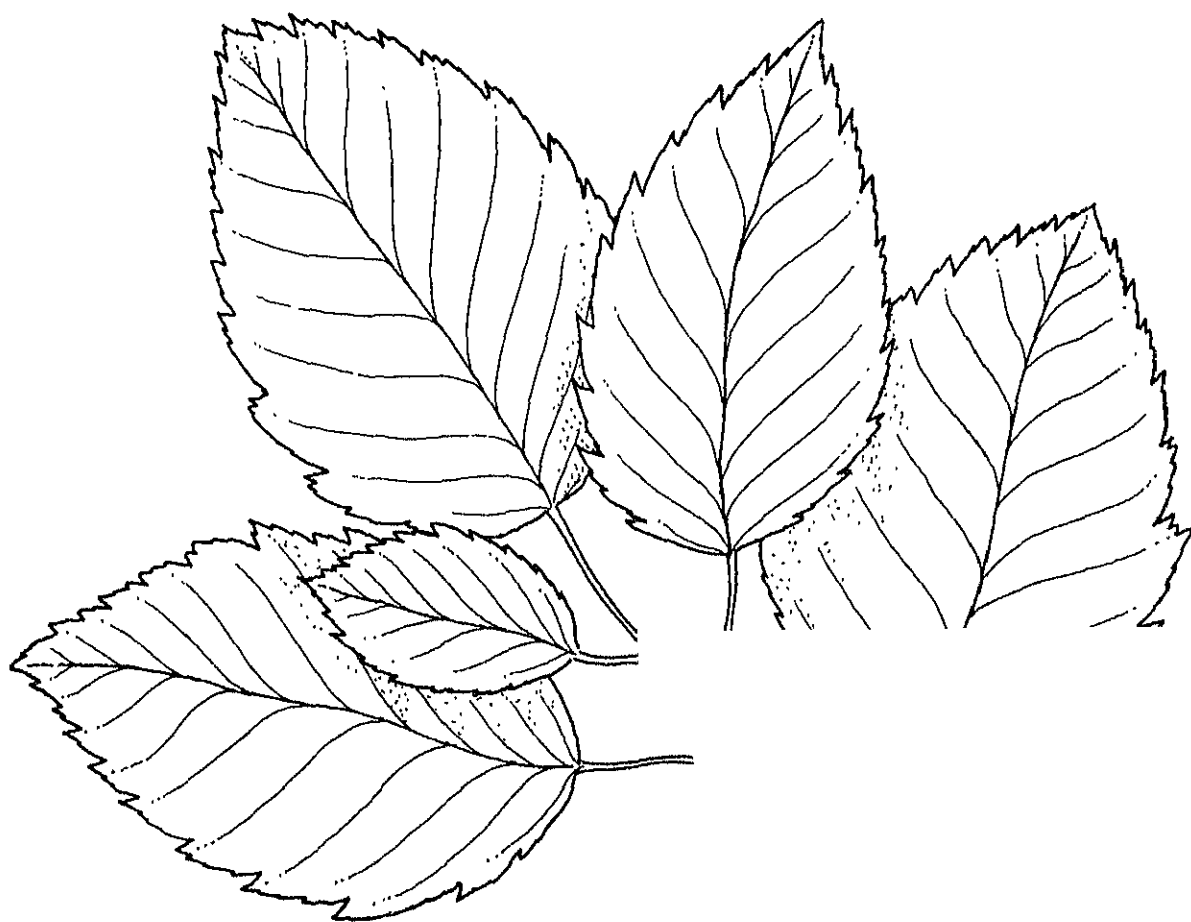
Speckled Alder

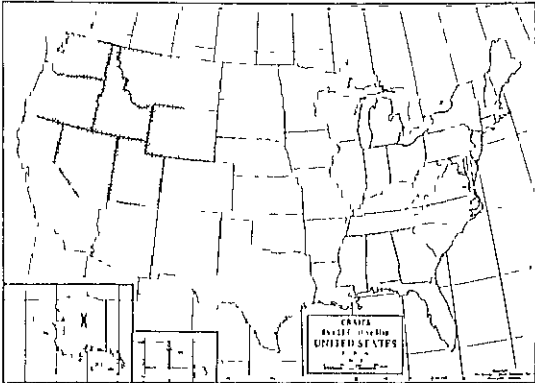
Alnus incana (L.) Moench

Family: Birch (Betulaceae)

March-June

Field Marks: This spring-flowering alder is distinguished by having the female flowers borne on drooping branches that are lower than the male flowering branches





Local Notes:

Habitat: Along streams, in swamps.

Habit: Sprawling or upright shrub up to 15 feet tall.

Stems: Trunk and branchlets brown to blackish and marked with elongated, white lenticels.

Leaves: Alternate, simple, ovate to oval to broadly elliptic, rounded to pointed at the tip, rounded or somewhat heart-shaped at the base, usually doubly toothed, more or less smooth.

Flowers: Male and female flowers borne separately but on the same plant, each kind arranged in clusters, male flowers usually 3 in a cluster, subtended by 4-5 small bracts; female flowers in spikes, each pair of flowers subtended by fleshy bracts.

Sepals: 3-5, united, greenish in the male flowers, absent in the female flowers.

Petals: 0.

Stamens: 3-5.

Pistils: Ovary 1, apparently inferior.

Fruits: Woody "cones" up to 1/2 inch long, with narrowly winged nutlets.

Notes: The fleshy bracts subtending the female flowers form the woody scales of the "cone" in fruit. The nutlets are eaten by birds and mammals.

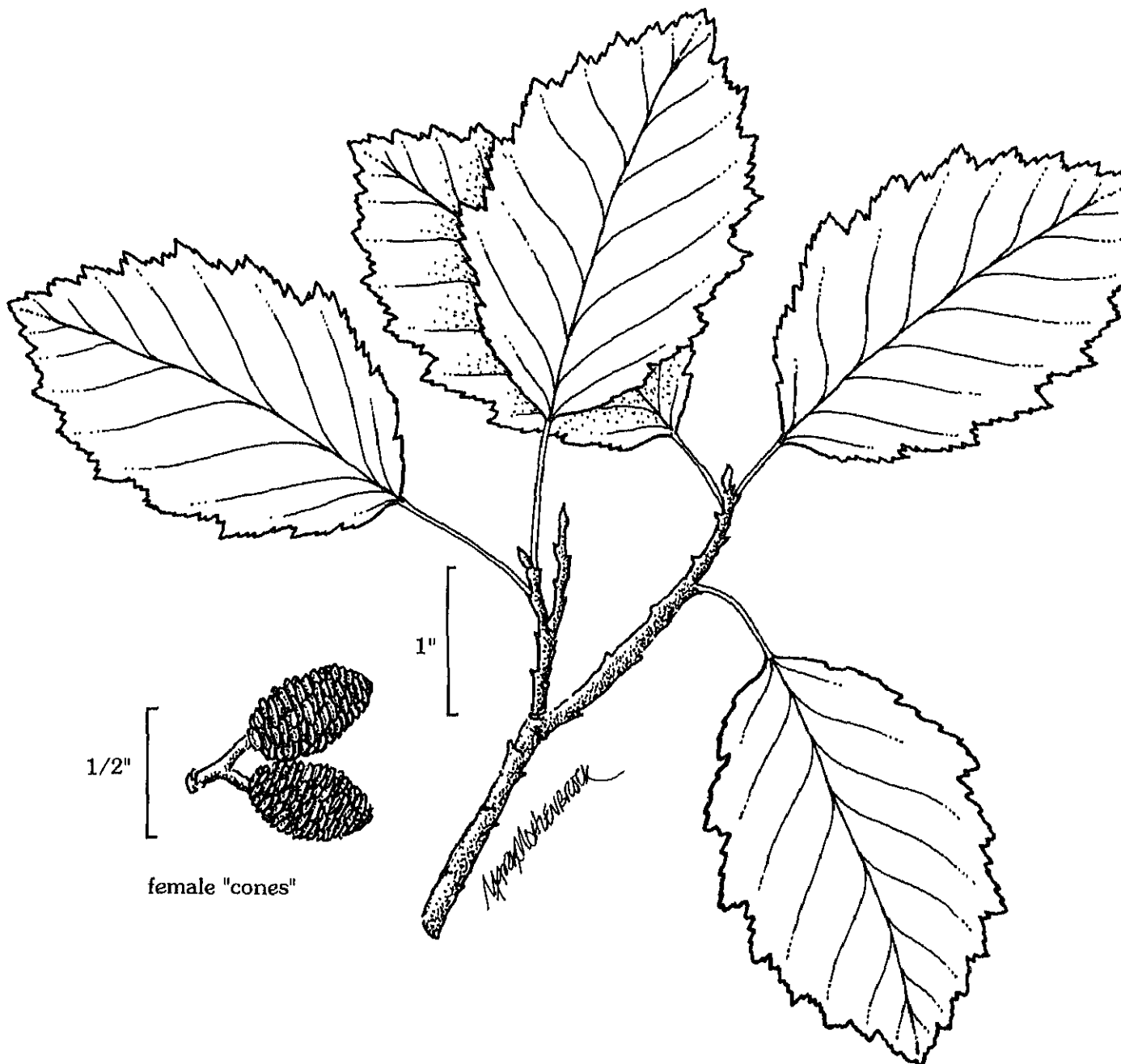
Thin-leaf Alder

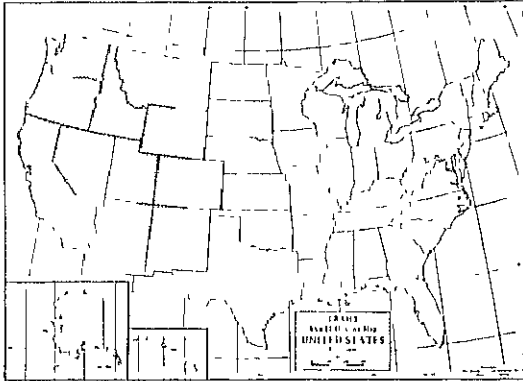
Alnus tenuifolia Nutt.

Family: Birch (Betulaceae)

April-June

Field Marks: This usually shrubby alder is distinguished by its doubly toothed and sometimes lobed leaves that are rounded or heart-shaped at the base.





Local Notes:



Habitat: Moist woods, along streams, mountain meadows.

Habit: Shrub or rarely a small tree up to 20 feet tall.

Twigs: Smooth, but with conspicuous white lenticels.

Bark: Smooth, gray or reddish brown.

Leaves: Aternate, simple, ovate to oblong, up to 4 inches long, pointed or rounded at the tip, rounded or heart-shaped at the base, doubly toothed and sometimes shallowly lobed, paler on the lower surface, with hairy veins.

Flowers: Male and female flowers borne separately but on the same plant; male spikes slender, drooping, up to 3 inches long; female spikes upright, up to 1/2 inch long; flowers open before the leaves unfold.

Sepals: 4 in the male flowers, 0 in the female.

Petals: 0.

Stamens: 4, attached to the base of the sepals.

Pistils: Ovary apparently superior.

Fruits: Nutlets up to 1/8 inch wide, with a narrow, membranaceous wing, borne in a woody "cone."

Notes: Thin-leaf alder is sometimes known as *Alnus incana* ssp. *tenuifolia*.

Baccharis glutinosa Pers.

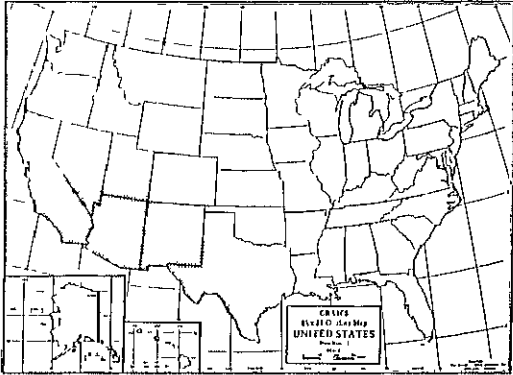
April-October

1"

leaf

1"

M. H. B. B. B. B.



Local Notes:



Habitat: Along streams and other waterways, particularly in the desert.

Habit: Shrub, woody at least at the base, up to 10 feet tall.

Stems: Upright, smooth, unbranched below, branched above

Leaves: Alternate, simple, linear-lanceolate, up to 6 inches long, up to 1 inch wide, pointed at the tip, tapering to the base, without hairs but sticky, usually toothed; leaf stalks up to 1/3 inch long.

Flowers: Many crowded into heads, the male heads separate from the female heads and on separate plants, both types forming terminal panicles; heads containing only disk flowers, by ovate to lance-ovate bracts up to 1/6 inch long.

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nd to form yellowish tubular flowers that comprise the disk.

oth.

lipoid, greenish, about 1/24 inch long, smooth.

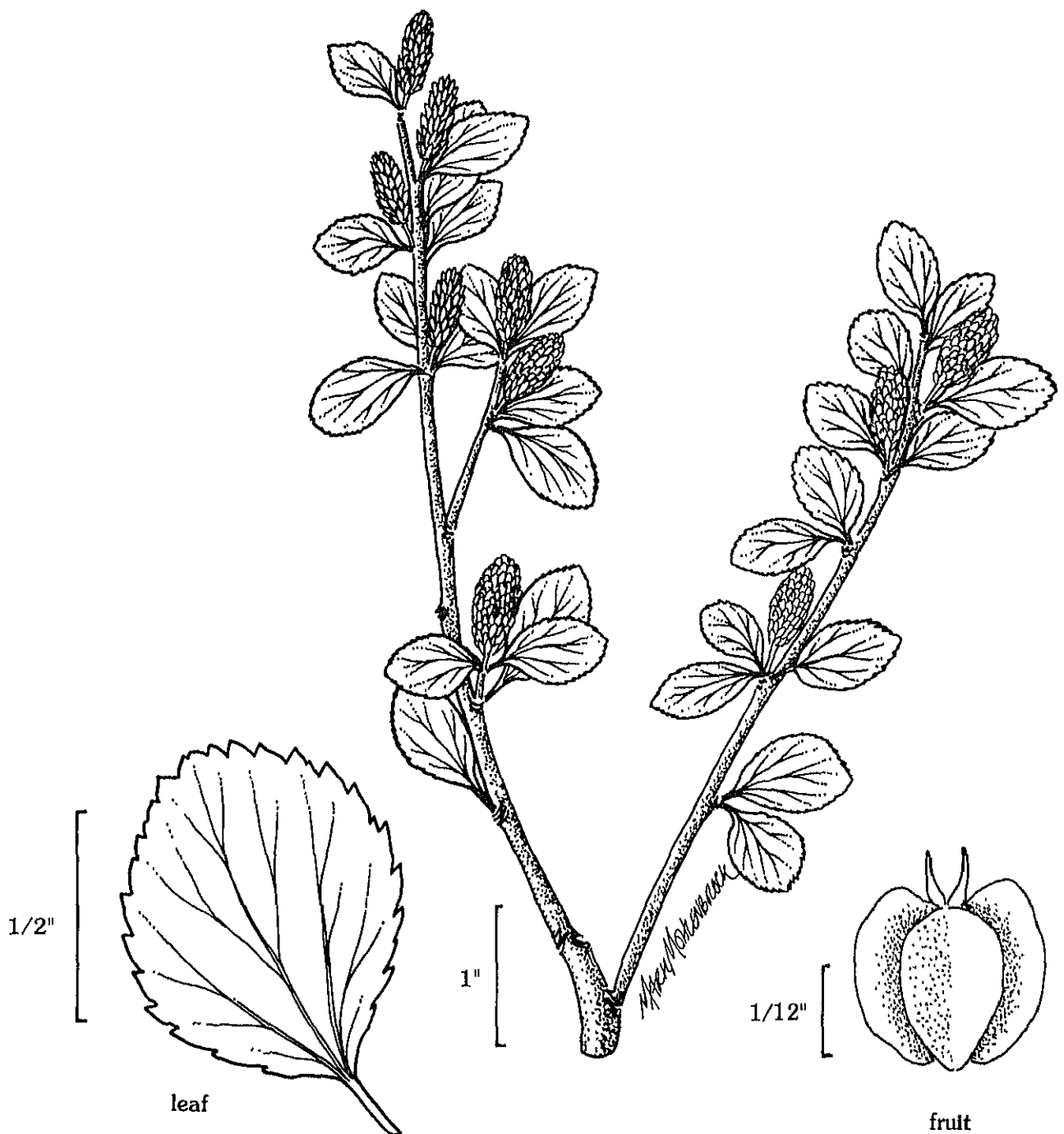
Tundra Dwarf Birch

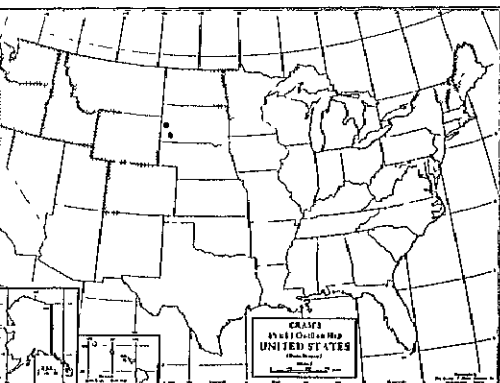
Betula glandulosa Michx.

Family: Birch (Betulaceae)

April-June

Field Marks: This birch is characterized by its shrubby growth form, its thick leaves rarely more than 1 inch long, and the resinous, wart-like glands on its twigs





Local Notes:



Habitat: Bogs, fens, along streams, sometimes in shallow, standing water.

Habit: Upright or sometimes prostrate shrub.

Twigs: Upright or prostrate, smooth except for wart-like, resin-producing glands.

Bark: Brown, not peeling.

Leaves: Alternate, simple, orbicular to obovate, rarely more than 1 inch long, up to 3/4 inch wide, rounded at the tip, rounded or tapering at the base, thick, toothed, smooth and dotted on the lower surface.

the male spikes borne separately from the female
1/2 inch long; female spikes longer and thicker.

gs.

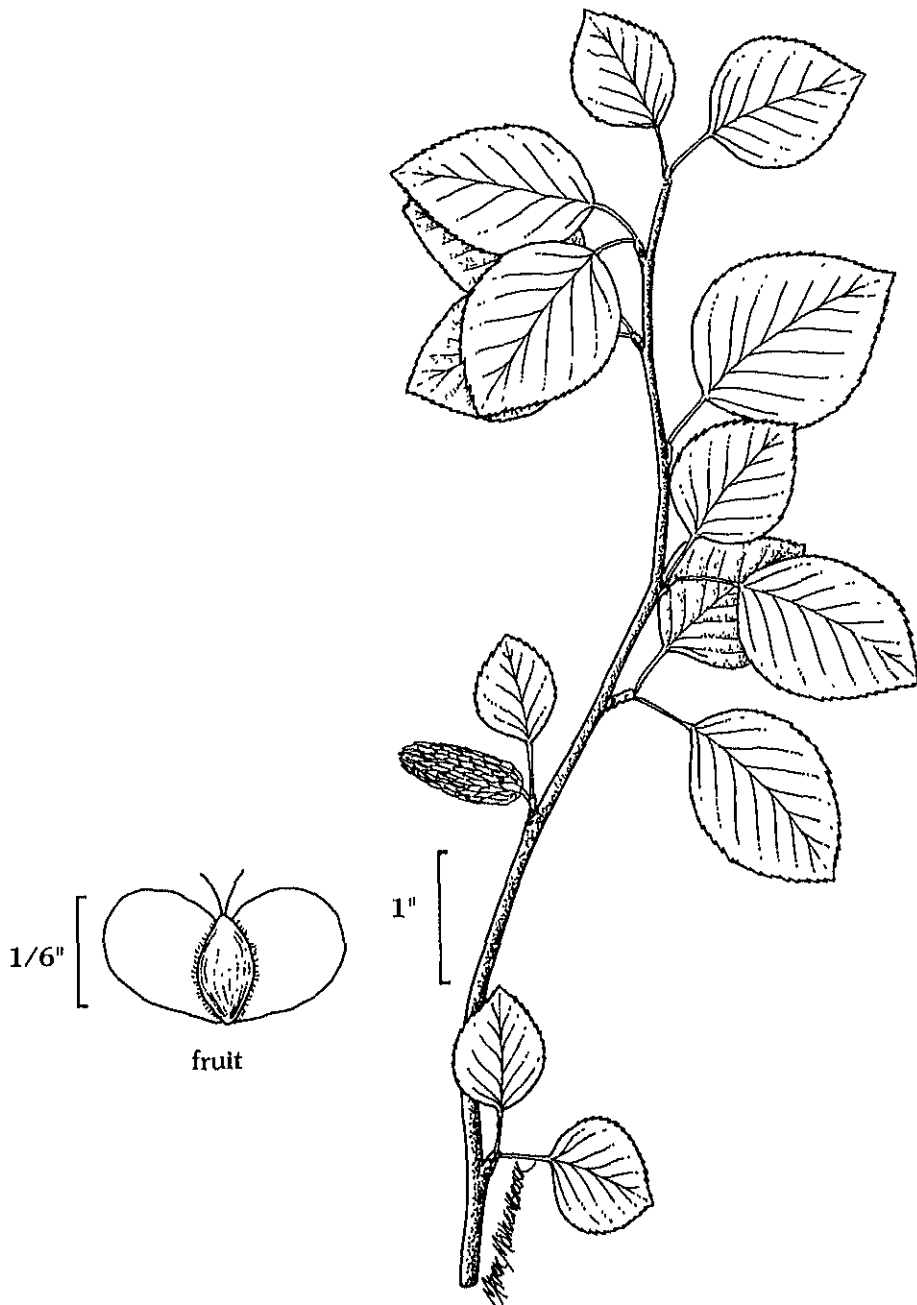
Spring Birch

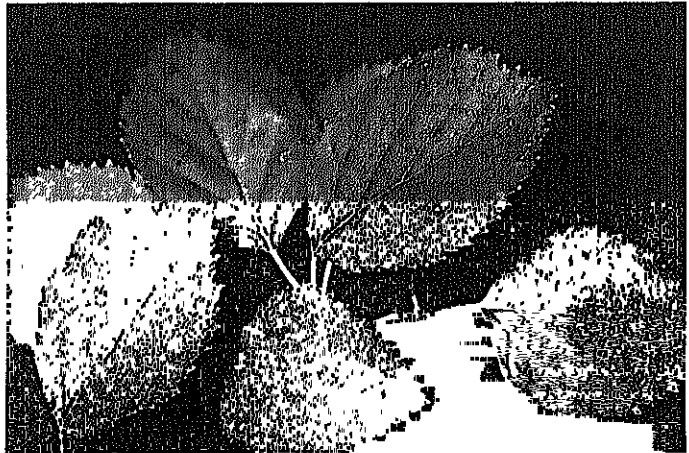
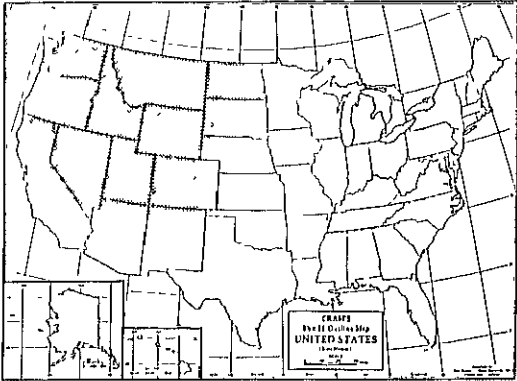
Betula occidentalis Hook.

Family: Birch (Betulaceae)

May-June

Field Marks: This birch is a small tree or large shrub that has a shiny bronze bark that does not peel off. Its thin, pointed, ovate leaves also help distinguish the species.





Local Notes:

Habitat: Along streams, in ravines, bogs.

Habit: Small tree or large shrub.

Bark: Smooth, shiny, bronze, not peeling.

Stems: Usually slightly glandular-sticky, with conspicuous pale lenticels.

Leaves: Alternate, simple, ovate, up to 2 inches long, not quite as wide, usually pointed at the tip, rounded or tapering to the base, doubly toothed, smooth, thin.

Flowers: Male and female flowers borne in separate spikes, the male spikes slender, pendulous, up to 3/4 inch long, with flowers in groups of 3, each group subtended by a small bract, the female spikes thicker and shorter, erect, with flowers in groups of 3, each group subtended by a small, 3-parted bract.

Sepals: 0.

Petals: 0.

Stamens: 2.

Pistils: Ovary inferior.

Fruits: "Cone"-like spikes consisting of 3-parted bracts that subtend tiny nutlets with narrow wings.

Notes: The immature male spikes are present during the winter. In part of its range, this tree is known as *Betula fontinalis*.

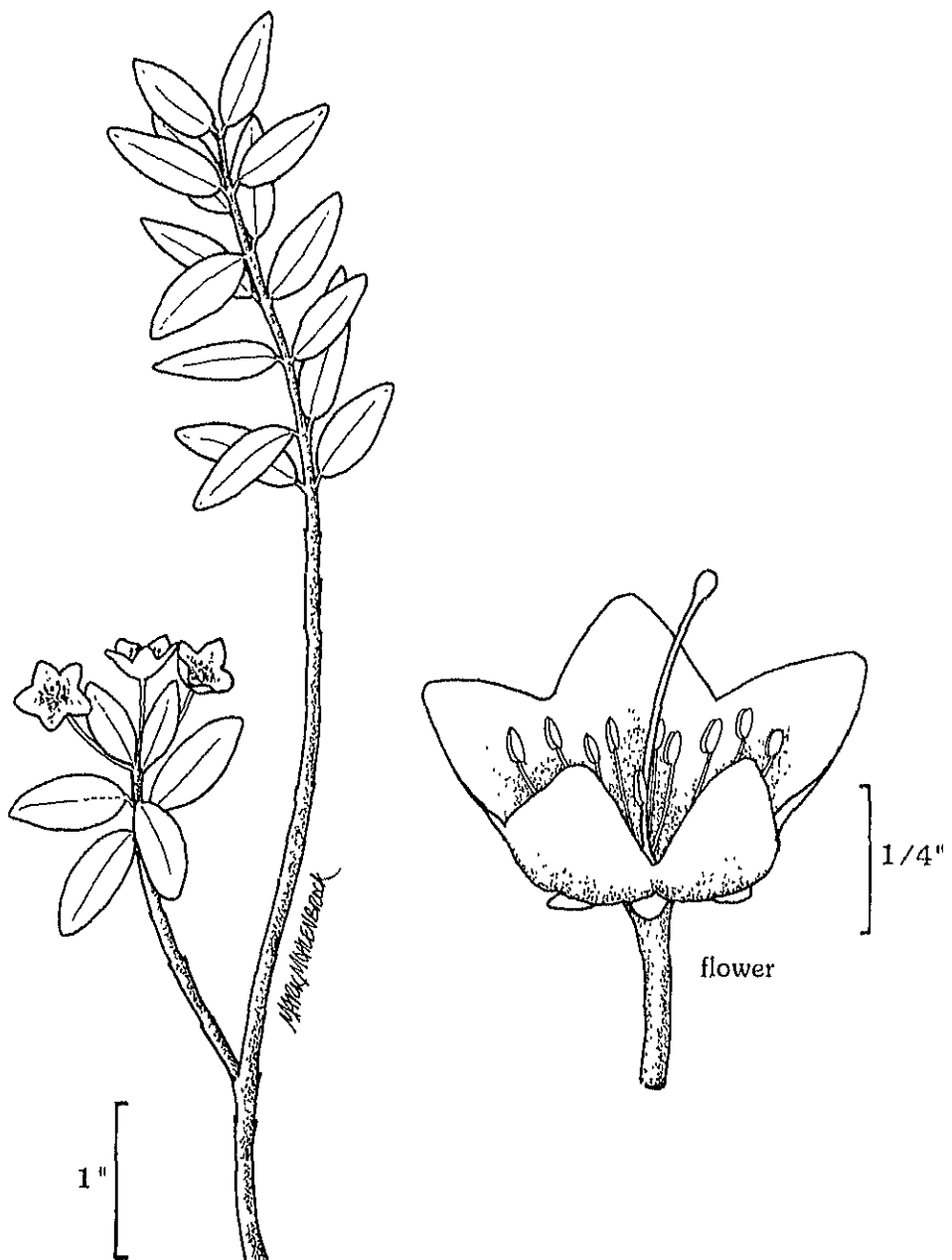
Alpine Bog Laurel

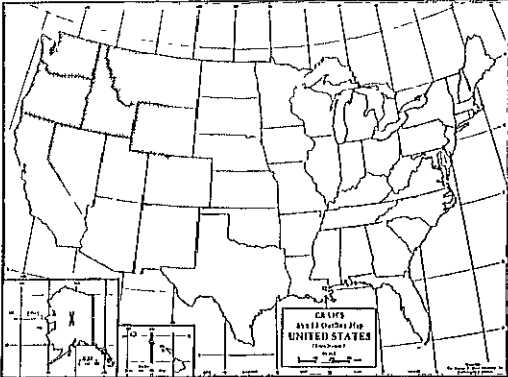
Kalmia microphylla (Hook.) A. Heller

Family: Heath (Ericaceae)

June-August

Field Marks: The distinguishing features of this low shrub are its oblong or oval, opposite, evergreen leaves that are less than twice as long as broad.





Local Notes:

Habitat: Moist ground.

Habit: Low-growing, spreading shrub.

Stems: Much branched, up to 8 inches long, smooth or hairy.

Leaves: Opposite, simple, evergreen, oblong or oval, rounded or barely pointed at the tip, tapering to the nearly sessile base, dark green above, paler beneath, up to 1 inch long, more than 1/2 inch wide, smooth or slightly hairy, without teeth, flat.

Flowers: Few in terminal clusters, up to 3/4 inch across, on smooth, slender stalks up to 2 inches long.

Sepals: 5, green, united below, 1/4-1/3 inch long, smooth, the lobes oblong to ovate.

Petals: 5, united to form a saucer, rose-purple, up to 3/4 inch across.

Stamens: 10, not exerted beyond the petals.

Pistils: Ovary superior, smooth; style slender.

Fruits: Capsules spherical, up to 1/3 inch in diameter, smooth, subtended by the persistent stipules.

Notes: *Kalmia polifolia* is sometimes considered the same as this species.

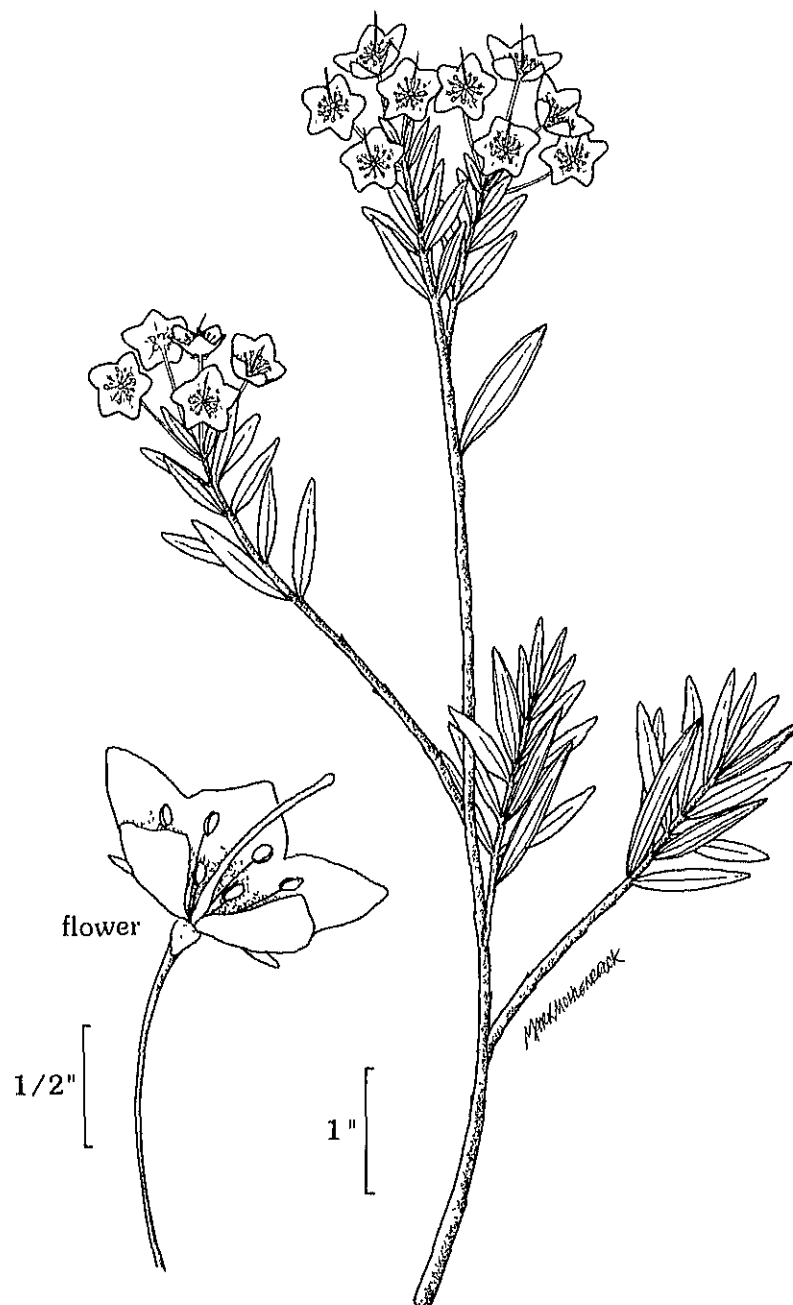
Pale Laurel

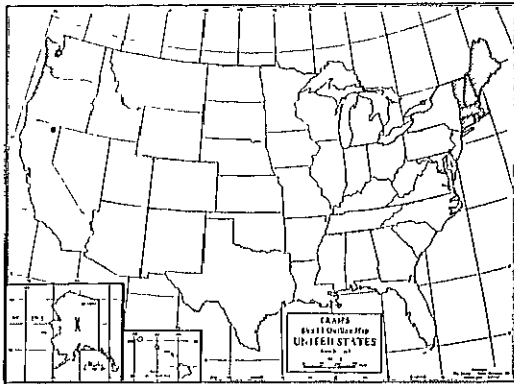
Kalmia polifolia Wangerh.

Family: Heath (Ericaceae)

May-July

Field Marks: This low-growing laurel is distinguished by its narrow, opposite, evergreen leaves that are more than twice as long as broad.





Local Notes:



Habitat: Wet meadows, bogs, swamps.

Habit: Low-growing, spreading shrub.

Stems: Much branched, up to 12 inches long, smooth or hairy.

Leaves: Opposite, simple, evergreen, linear to oblong, pointed at the tip, tapering to the nearly sessile base, dark green above, more or less glaucous below, up to 1 inch long, less than 1/2 inch wide, smooth or slightly hairy, without teeth but sometimes rolled under along the edges.

Flowers: Few in terminal clusters, 3/4-1 inch across, on smooth, slender stalks up to 1 3/4 inches long.

Sepals: 5, green, united below, 1/3-1/2 inch long, smooth, the lobes oblong to ovate.

Petals: 5, united to form a saucer, rose-purple, 3/4-1 inch across.

Stamens: 10, not exerted beyond the petals.

Pistils: Ovary superior, smooth; style slender.

Fruits: Capsules spherical, up to 1/3 inch in diameter, smooth, subtended by the persistent sepals.

Notes: This species is sometimes combined with *K. microphylla*.

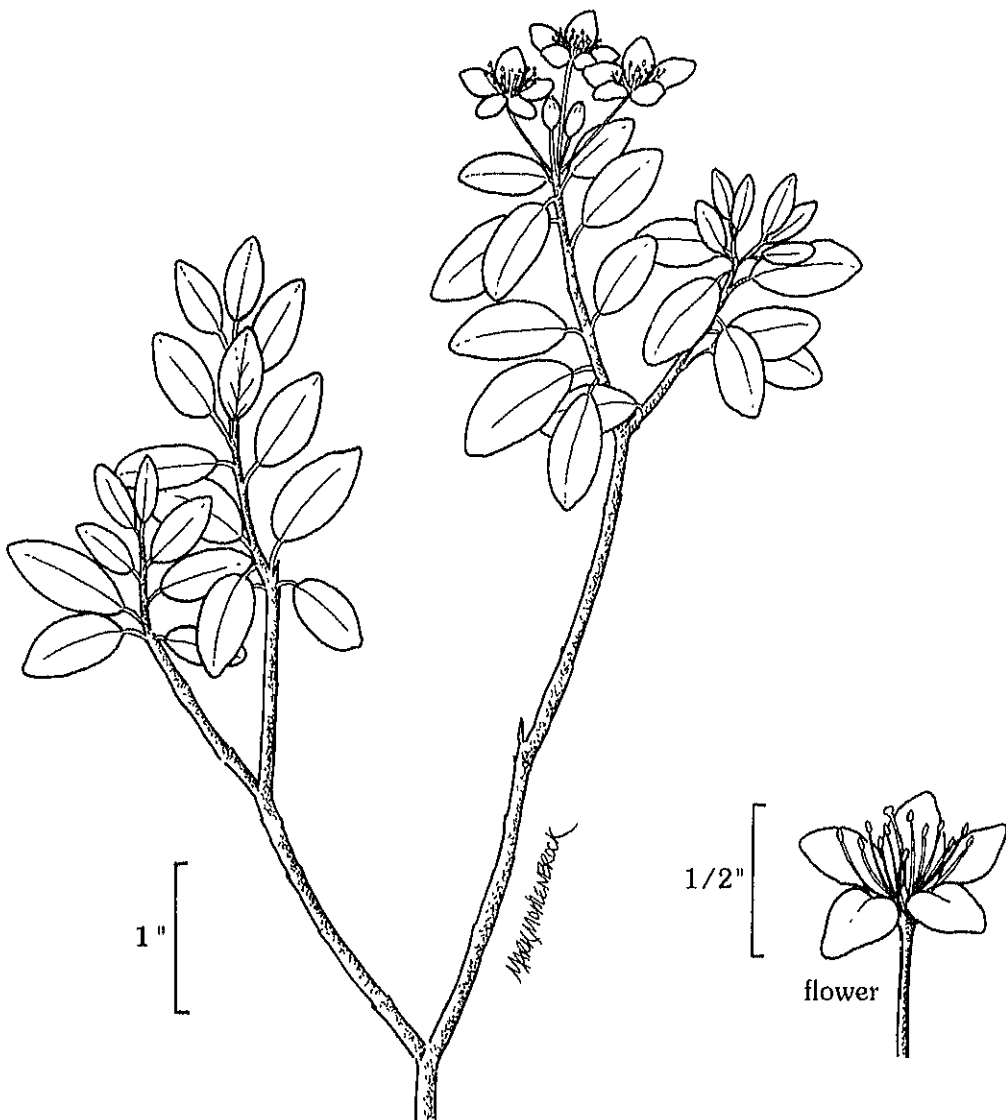
Glandular Labrador-tea

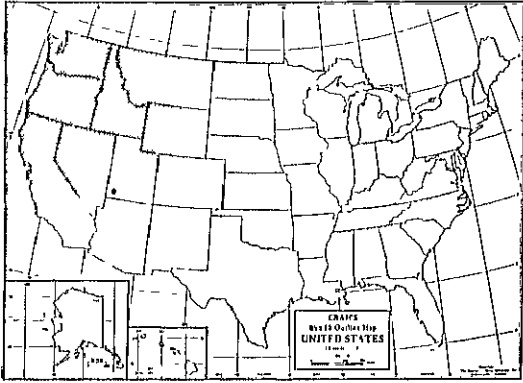
Ledum glandulosum Nutt.

Family: Heath (Ericaceae)

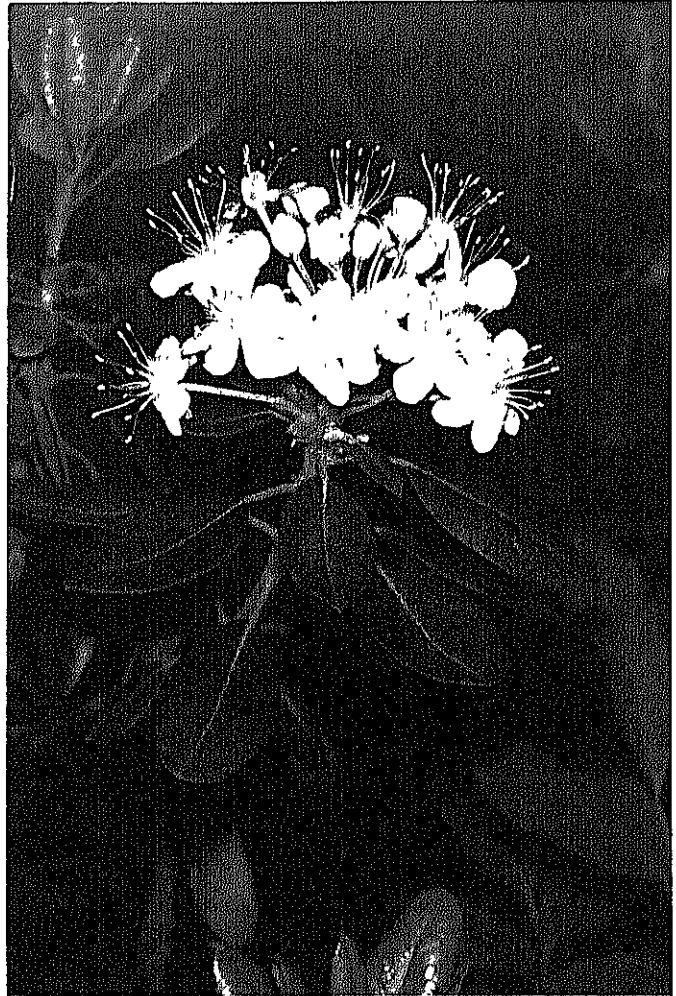
May-August

Field Marks: This shrub has evergreen, aromatic leaves that are elliptic to oval and wrinkled-looking on the upper surface. The white flowers have 5 free petals





Local Notes:



Habitat: Wet meadows, bogs, swamps.

Habit: Evergreen shrub with aromatic leaves.

Stems: Upright, usually branched, up to 6 feet tall; twigs glandular-hairy; bark at maturity peeling in shreds.

Leaves: Alternate, simple, evergreen, leathery, elliptic to oblong, usually rounded at the tip, rounded or tapering at the base, wrinkled-looking on the upper surface, glandular and paler on the lower surface, up to 2 1/2 inches long, flat or rolled under along the edges; leaf stalks 1/4-1/2 inch long.

Flowers: Several to many in terminal clusters; stalks usually glandular-hairy, yellow-green, up to 1 inch long.

Sepals: 5, united below, green, up to 1/16 inch long, the lobes ciliate.

Petals: 5, free from each other, oblong, white, 1/4-1/3 inch long.

Stamens: 10.

Pistils: Ovary superior.

Fruits: Capsules nearly round to ovoid, up to 1/4 inch long, with many elongated, winged seeds.

Thicket Creeper

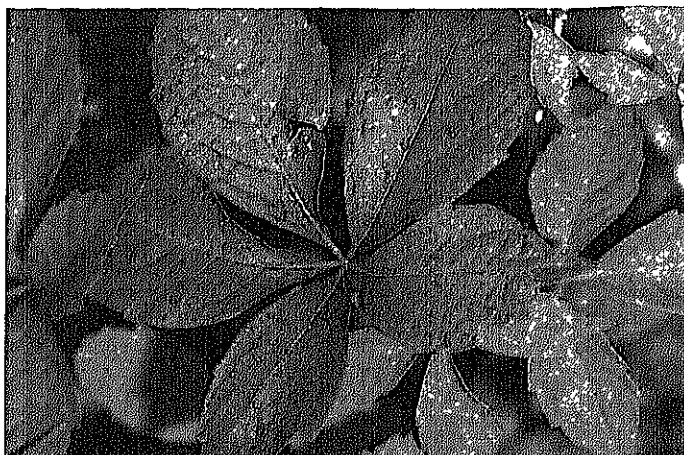
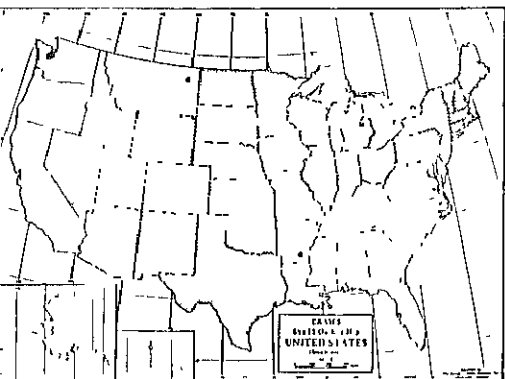
Parthenocissus vitacea (Knerr) A. Hitchc.

Family: Grape (Vitaceae)

May-July

Field Marks: Unlike the Virginia creeper (*P. quinquefolia*), the branched tendrils of this species do not end in adhesive disks. The leaves of the thicket creeper tend to be more shiny than those of the Virginia creeper.





Local Notes:

Habitat: Thickets, open woods.

Habit: Climbing or scrambling vine with tendrils.

Stems: Climbing or scrambling, up to several feet long; tendrils branched, not bearing adhesive disks at the tips.

Leaves: Alternate, palmately compound, with 5 leaflets; leaflets elliptic to obovate, up to 6 inches long, pointed at the tip, tapering to the base, coarsely toothed, shiny on the upper surface, sparsely hairy on the lower.

Flowers: Several in compound cymes.

Sepals: 5, green, tooth-like, united below, about 1/20 inch long.

Petals: 5, yellow-green, free from each other, 1/12-1/10 inch long.

Stamens: 5.

Pistils: Ovary superior.

Fruits: Berries brown, up to 1/2 inch in diameter, more or less veiny, containing 1-4 seeds.

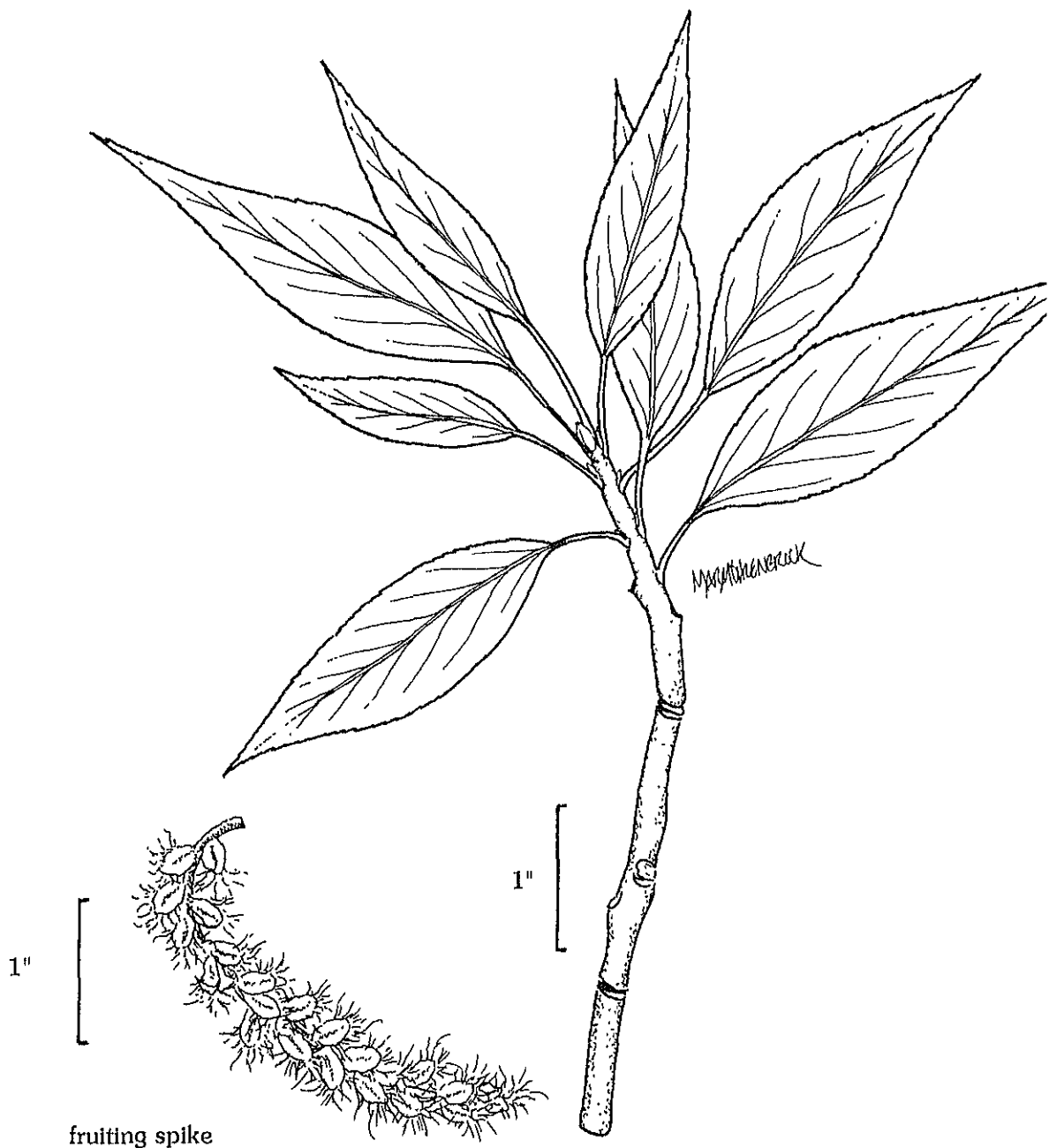
Notes: There is a report of this species from California.

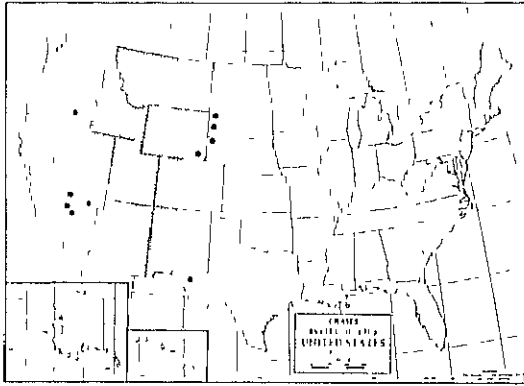
Populus angustifolia E. James

Populus angustifolia E. James

February-Apr

Field Marks: This tree is recognized by its lanceolate, toothed leaves that are paler on the lower surface. It differs from similar-leaved willows by having its leaf buds covered by several scales.





Local Notes:



Habitat: Along streams, in moist woods

Habit: Tree up to 60 feet tall; trunk light brown, shallowly furrowed

Stems: Twigs orange-brown at first, becoming tan, not hairy

Leaves: Alternate, simple, lanceolate, up to 4 inches long, up to 2 inches wide, long-pointed at the tip, rounded or tapering at the base, pale green on the lower surface, smooth, toothed.

Flowers: Many crowded into elongated spikes up to 4 inches long, the male spikes borne on separate trees from the female flowers, each flower subtended by 1 bract

Sepals: 0.

Petals: 0.

Stamens: 10-20.

Pistils: Ovary superior

Fruits: Capsules nearly spherical but with a short point at the tip, up to 1/4 inch long; seeds with tufts of hairs

Notes: The flowers bloom before the leaves unfold.

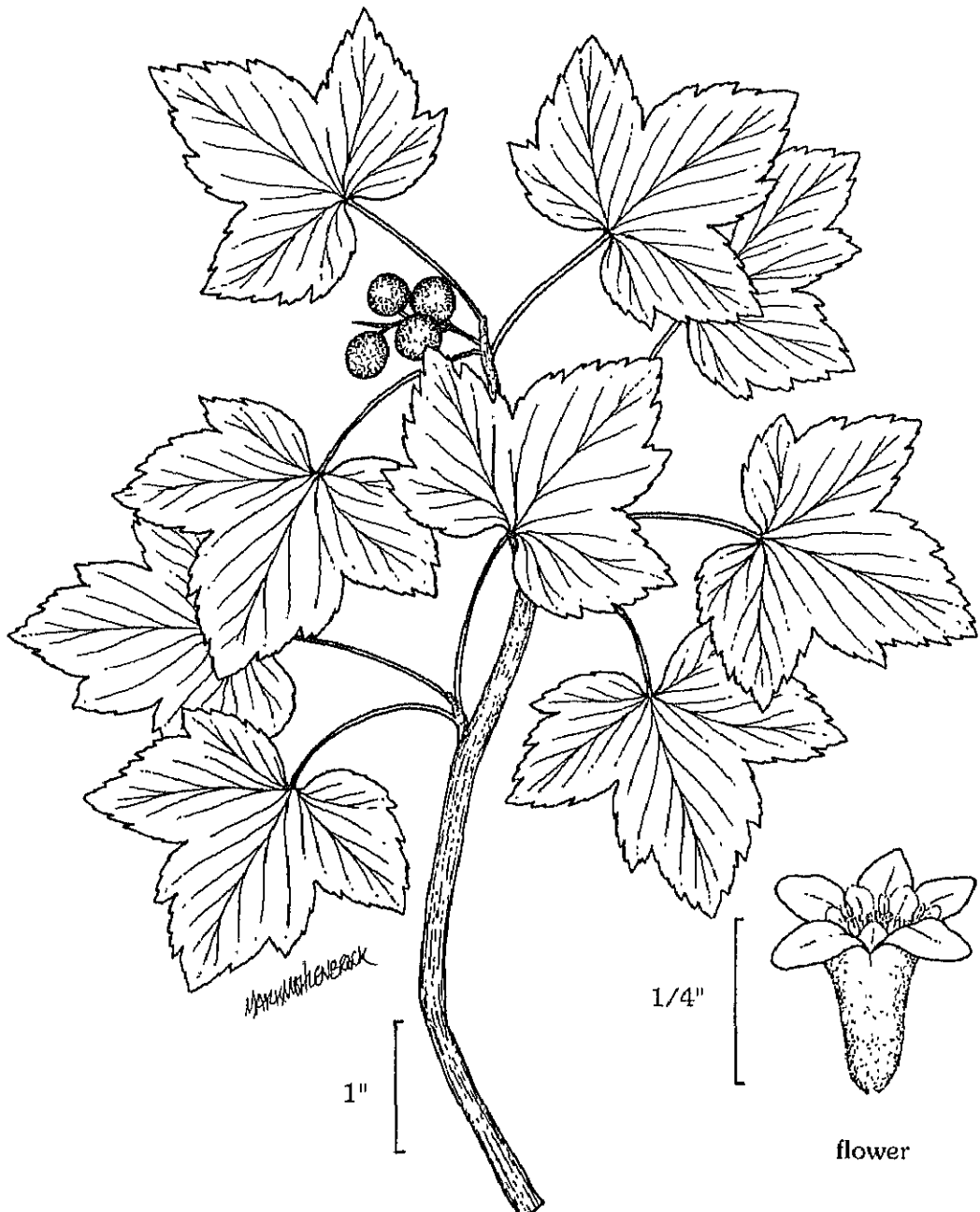
Hudson Bay Currant

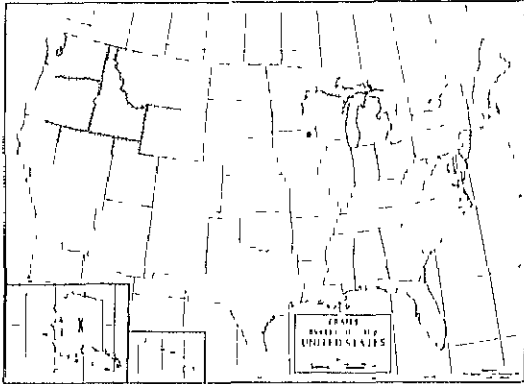
Ribes hudsonianum Richards.

Family: Saxifrage (Saxifragaceae)

May-June

Field Marks: The flowers of this species are borne in racemes and have 5 white sepals. The leaves have shiny dotted glands on the lower surface.





Local Notes:



Habitat: Along streams, wet woods, wet meadows, swamps

Habit: Upright shrub up to 6 feet tall

Stems: Ascending to upright, without thorns

Leaves: Alternate, simple, palmately 3- to 5-lobed, up to 3 inches across, heart-shaped at the base, toothed, smooth or sparsely hairy, with shiny, glandular dots on the lower surface

Flowers: Several in ascending to upright racemes up to 6 inches long, each flower on a stalk up to 1/3 inch long.

united below to form a cup, white, up to 1/4 inch long.

from each other, about 1/10 inch long.

few glands

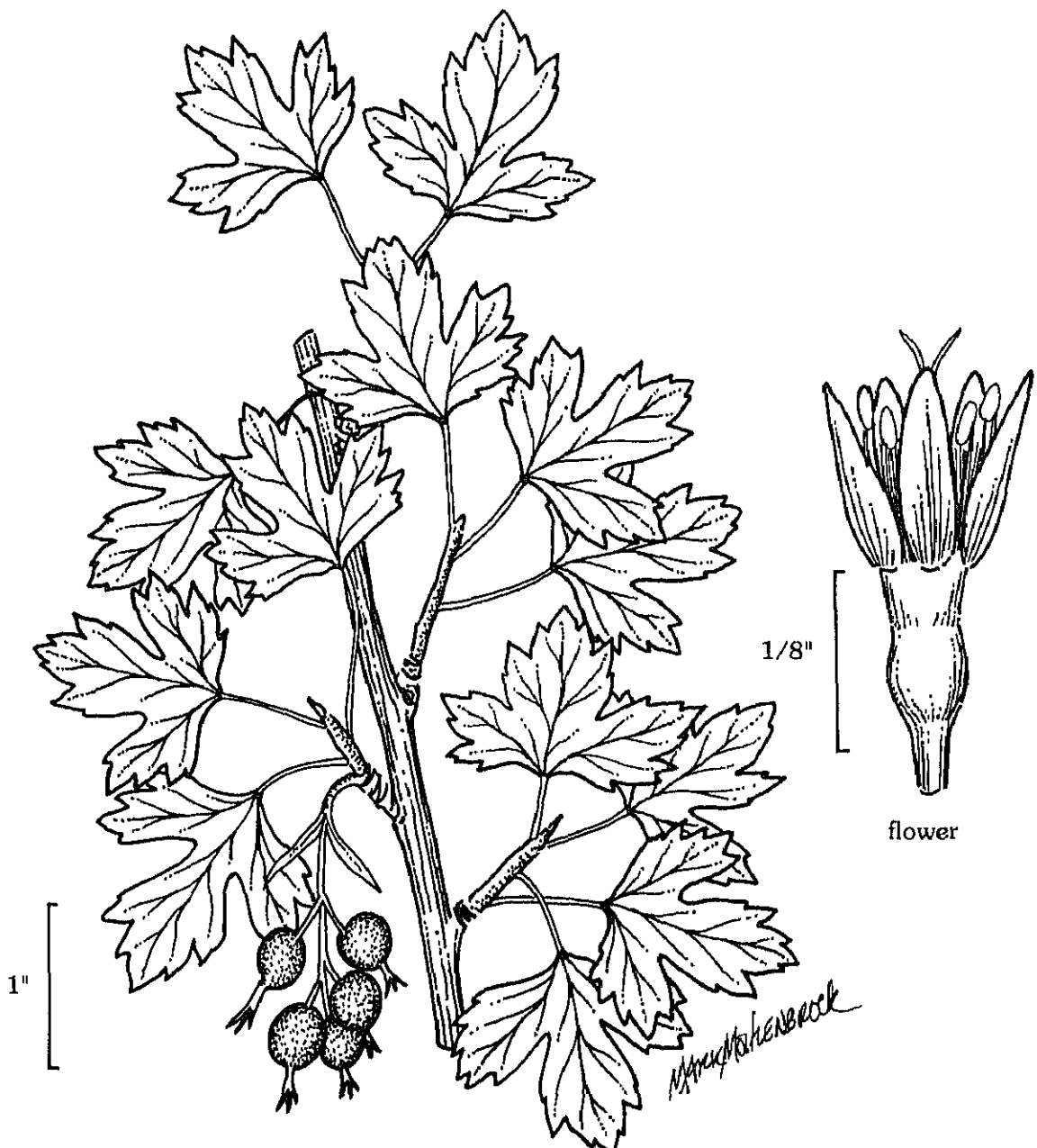
White-stem Gooseberry

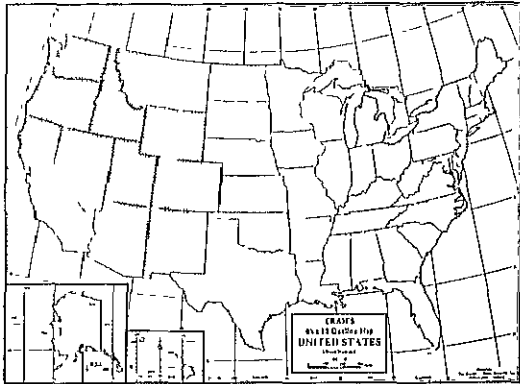
Ribes inerme Rydb.

Family: Saxifrage (Saxifragaceae)

May-June

Field Marks: This gooseberry differs from most others by having few or no bristles or spines on the branches. The leaves are smooth.





Local Notes:

Habitat: Along streams, shaded woods, particularly in the mountains.

Habit: Much-branched shrub up to 8 feet tall.

Twigs: Few or no spines at the nodes, and few or no bristles between the nodes.

Leaves: Alternate, simple, up to 3 inches long, up to 3 inches wide, palmately 3- or 5-lobed, each lobe with a few rounded teeth, smooth, rounded or heart-shaped at the base.

Flowers: 1-4 in the axils of the leaves, on stalks shorter than the leaf stalks.

Seeds: 5 united to form a cup, green or purplish-tinged, smooth.

her, white, 1/12-1/8 inch long.

1/4-1/2 inch in diameter.

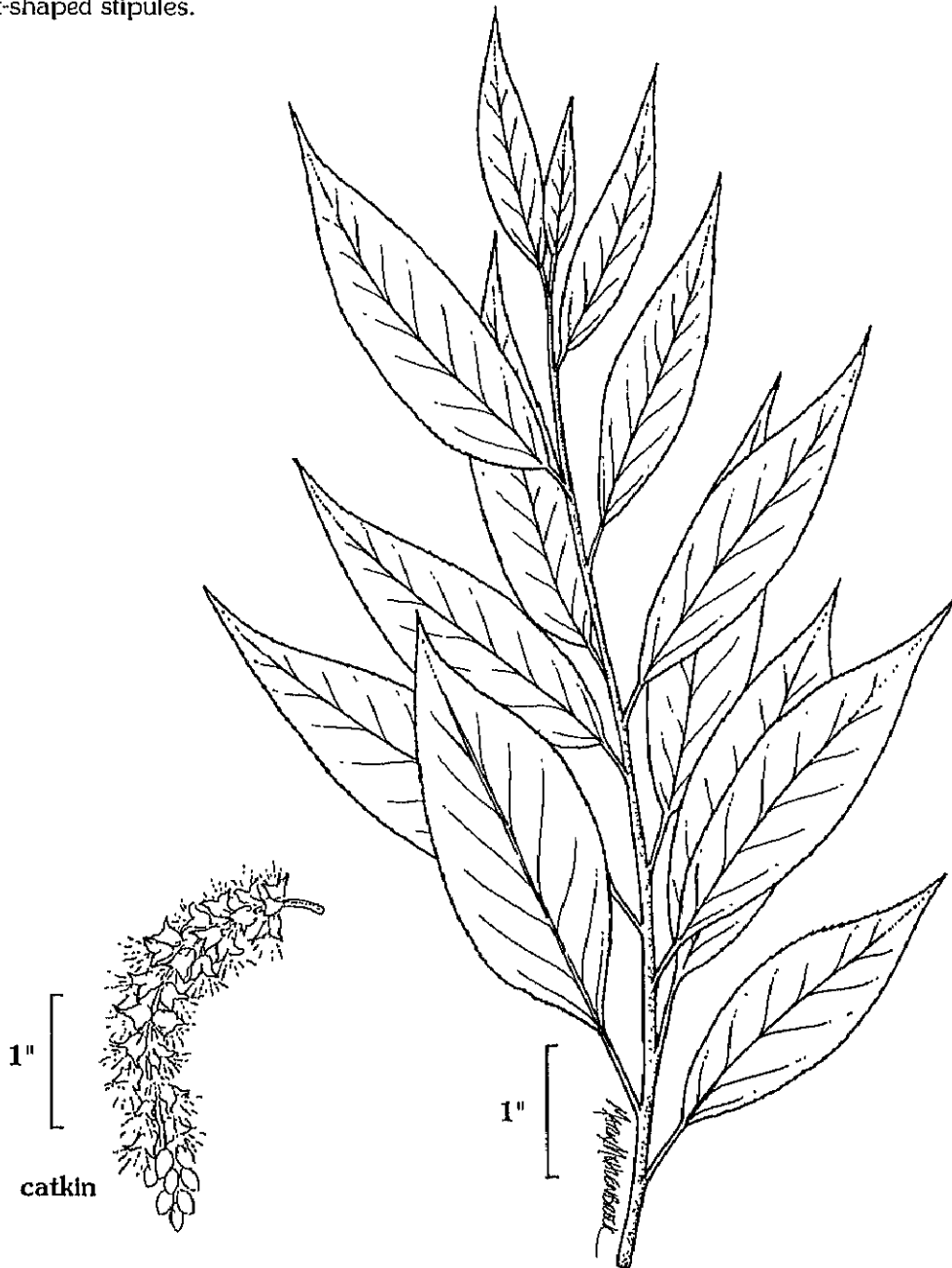
Peach-leaf Willow

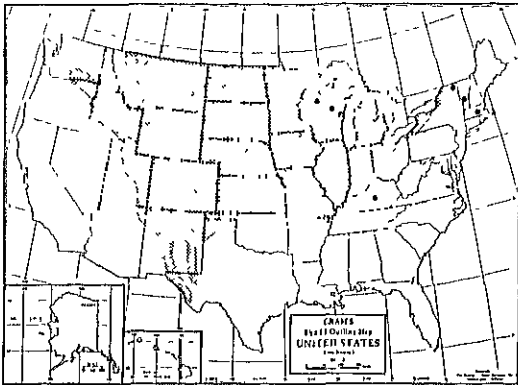
Salix amygdaloides Anderss.

Family: Willow (Salicaceae)

April-May

Field Marks: This species is distinguished by its paler lower leaf surface, its leaves usually about 1/3 as broad as long, the absence of glands on its leaf stalks, and often the presence of heart-shaped stipules.





Local Notes:

Habitat: Along streams, around lakes and ponds, floodplain woods, wet ditches.

Habit: Tree up to 50 feet tall.

Bark: Grayish brown, shallowly furrowed, becoming somewhat scaly.

Stems: Twigs shiny, gray to yellowish, smooth.

Leaves: Alternate, simple, lanceolate to broadly lanceolate, long-pointed at the tip, tapering or rounded at the base, finely toothed, up to 3 inches long, up to 1 1/2 inches wide, pale on the lower surface, smooth, without glands on the stalk; stipules often present, frequently as much as 1/2 inch wide, heart-shaped.

Flowers: Male and female borne in dense spikes on the same tree, opening as the leaves begin to open; male spikes very slender, up to 4 inches long; female spikes not as slender, up to 3 inches long.

Sepals: 0.

Petals: 0.

Stamens: 4-7.

Pistils: Ovary smooth.

Fruits: Capsules ovoid, up to 1/4 inch long, smooth, not crowded in the spike, each capsule on a very short stalk.

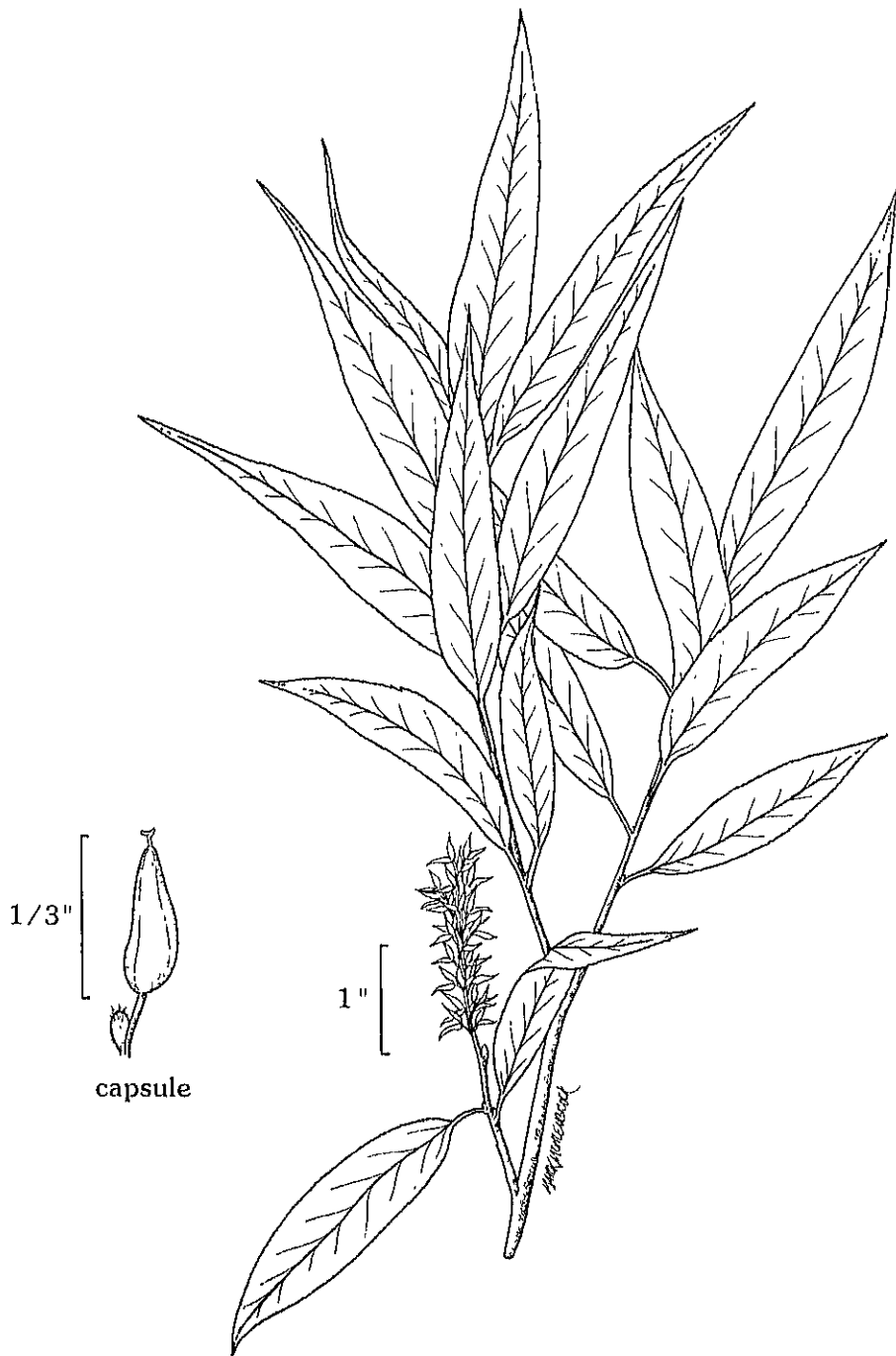
Pacific Willow

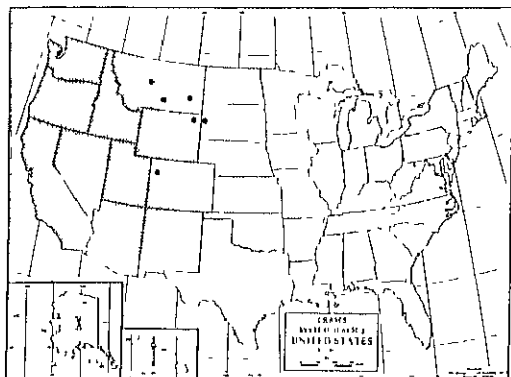
Salix lasiandra Benth.

Family: Willow (Salicaceae)

March-May

Field Marks: This willow is a tree with smooth, shiny twigs and lanceolate leaves with long-pointed tips and glaucous underneath. There are small glands on the leaf stalk.





Local Notes:

Habitat: Along streams.

Habit: Tree to 50 feet tall.

Bark: Bark rough, brown.

Stems: Twigs smooth, shiny, reddish.

Leaves: Alternate, simple, lanceolate, up to 4 1/2 inches long, up to 1 3/4 inches wide, long-pointed at the tip, tapering to the base, smooth, glaucous on the lower surface, with tiny glandular teeth along the edges; leaf stalk up to 3/4 inch long, bearing small glands; stipules small.

Flowers: Male and female flowers borne separately in separate spikes, the male spikes up to 2 1/2 inches long, the female spikes up to 4 1/2 inches long.

Sepals: 0.

Petals: 0.

Stamens: 4-5, the base of the filaments hairy.

Pistils: Ovary superior, smooth.

Fruits: Capsules lanceoloid, up to 1/3 inch long, smooth.

Notes: Deer and elk may browse the young shoots of this plant.

Arroyo Willow

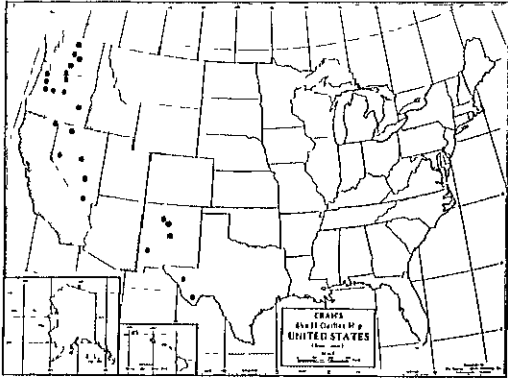
Salix lasiolepis Benth.

Family: Willow (Salicaceae)

February-April

Field Marks: This shrub or small tree usually has leaves that are without teeth and are seldom more than 3 times longer than wide.





Local Notes:

Habitat: Along rocky streams and in arroyos.

Habit: Shrub or small tree up to 35 feet tall.

Stems: Twigs yellow to dark brown, hairy.

Leaves: Alternate, simple, oblanceolate, up to 4 inches long, up to 2 inches wide, rounded or pointed at the tip, tapering to the base, smooth or slightly hairy, usually glaucous on the lower surface, usually without teeth, the edges sometimes rolled under.

Flowers: Male and female flowers borne separately in separate spikes, up to 3 inches long, appearing before the leaves begin to unfold.

Sepals: 0.

Petals: 0.

Stamens: 2, with smooth filaments.

Pistils: Ovary superior, smooth.

Fruits: Capsules oblanceoloid, up to 1/4 inch long, smooth, on stalks about 1/20 inch long.

Notes: Deer and elk may browse the young shoots of this plant.

Lemon's Willow

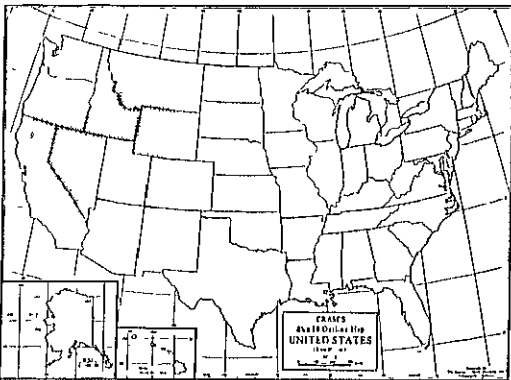
Salix lemmonii Bebb

Family: Willow (Salicaceae)

May-June

Field Marks: This shrubby willow has toothed or toothless leaves that are not more than four times longer than wide and are usually smooth at maturity.





Local Notes:



Habitat: Wet areas in the mountains.

Habit: Shrub up to 15 feet tall.

Stems: Slender, smooth or sparsely hairy, sometimes glaucous, yellow when young, becoming brownish black and shiny with age.

Leaves: Alternate, simple, lanceolate to oblanceolate, up to 4 inches long, up to 1 inch wide, pointed at the tip, tapering to the base, with or without teeth, silky-hairy when young, becoming smooth at maturity; stipules present.

Flowers: Male and female flowers borne separately in separate spikes, the male spike up to 1 1/2 inches long, the female up to 2 1/2 inches long, both types of spikes appearing as the leaves are unfolding.

Sepals: 0.

Petals: 0.

Stamens: 2, the filaments hairy at the base.

Pistils: Ovary superior, hairy.

Fruits: Capsules lanceoloid, silky-hairy, up to 1/3 inch long, on stalks up to 1/10 inch long.

Notes: Deer and elk may browse the young shoots of this plant.

Diamond-leaf Willow

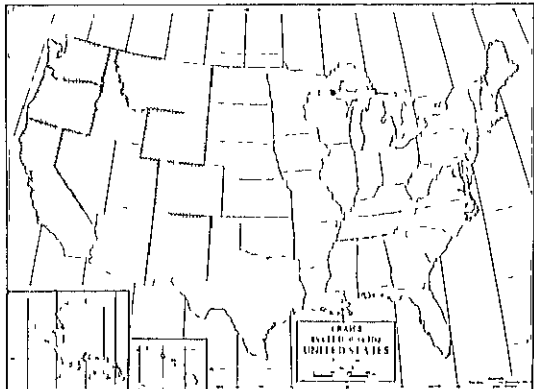
Salix planifolia Pursh

Family: Willow (Salicaceae)

May-June

Field Marks: This shrubby willow may be distinguished by its usually toothless, smooth leaves up to 3/4 inch wide.





Local Notes:

Habitat: Along streams, moist meadows, fens.

Habit: Shrub with numerous trunks, up to 10 feet tall.

Twigs: Reddish brown, smooth, shiny.

Leaves: Alternate, simple, elliptic to oblanceolate, up to 2 1/2 inches long, up to 3/4 inch wide, pointed or rounded at the tip, rounded or tapering to the base, paler on the lower surface, smooth at maturity, without teeth; leaf stalks up to 1/3 inch long.

1/2 inches long, appearing as the leaves
borne separately, bracts black.

up to 1/6 inch long.

mid August.

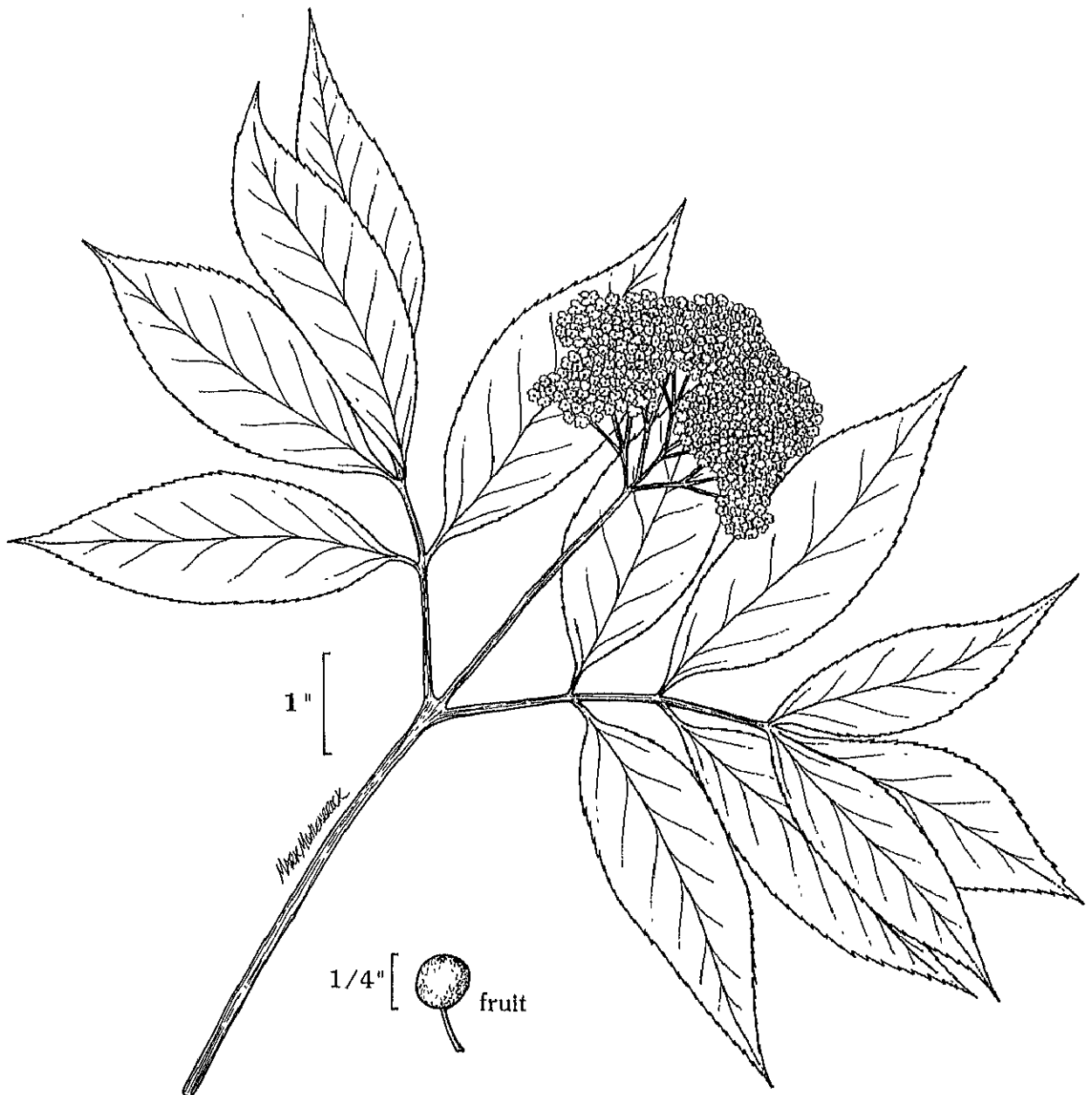
Blue Elder

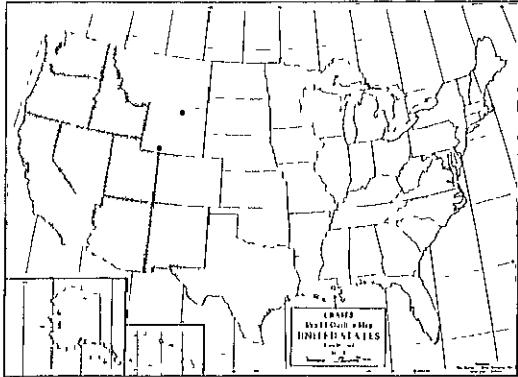
Sambucus cerulea Raf.

Family: Honeysuckle (Caprifoliaceae)

May-September

Field Marks: The flowers in this species form a flat-topped inflorescence. The blue berries are covered by a whitish waxy coat. The leaves are divided into 5-9 leaflets.





Local Notes:



Habitat: Usually moist, open areas.

Habit: Many-stemmed shrub up to 25 feet tall, occasionally becoming tree-like.

Stems: Upright, soft and pithy, smooth, glaucous.

Leaves: Opposite, pinnately divided into 5-9 leaflets; leaflets lanceolate to narrowly ovate, up to 6 inches long, up to 2 inches wide, long-pointed at the tip, rounded at the asymmetrical base, toothed, smooth or slightly hairy.

Flowers: Many in a flat-topped, compound umbel up to 8 inches across; flower stalks short, slender, smooth.

Sepals: 5, green, united, very small.

Petals: 5, white or cream-colored, united, up to 1/3 inch across, the lobes longer than the tube.

Stamens: 5, attached to the petals.

Pistils: Ovary inferior, smooth.

Fruits: Berries spherical, up to 1/4 inch in diameter, blue but covered with a whitish wax; nutlets wrinkled.

Notes: The berries can be eaten by man, as well as by a variety of birds.

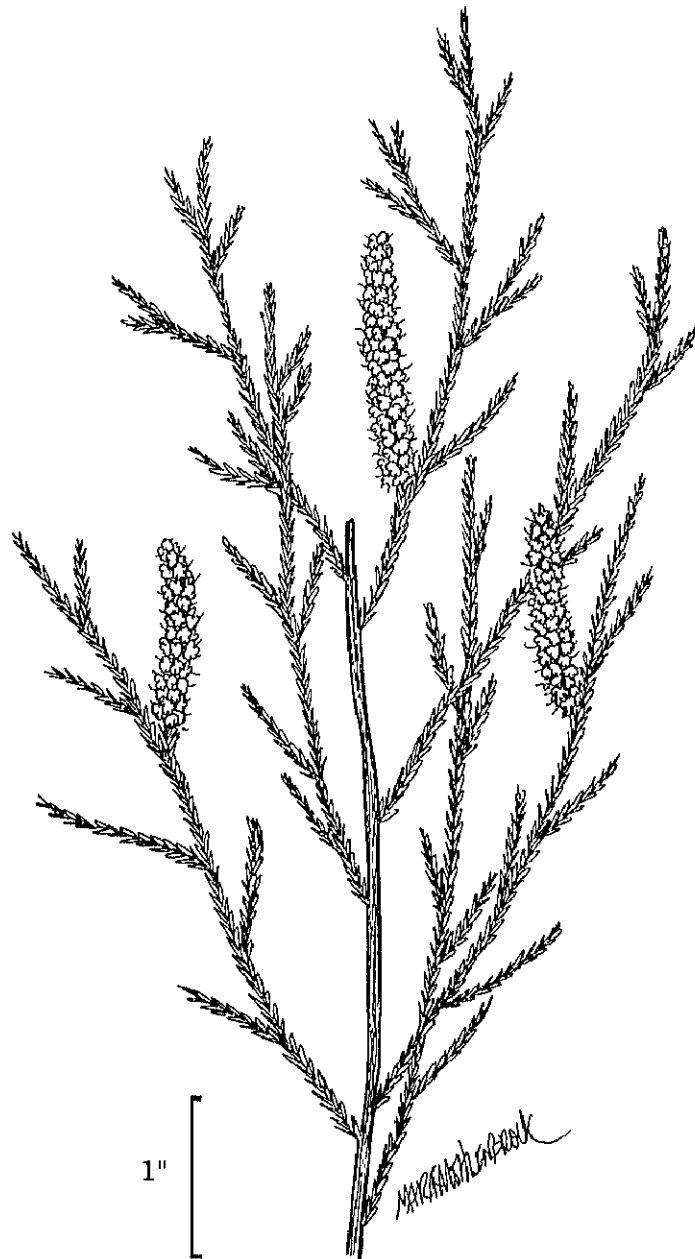
Chinese Tamarisk

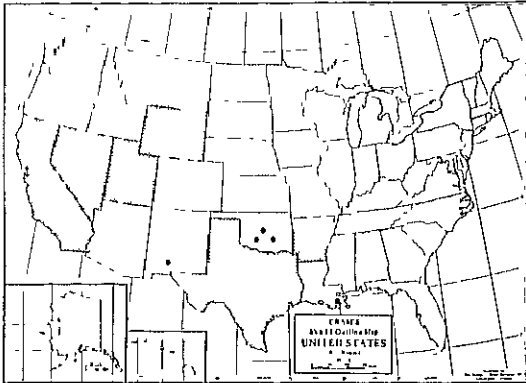
Tamarix chinensis Loureiro

Family: Tamarisk (Tamaricaceae)

May-September

Field Marks: All species of *Tamarix* are very much alike. This one differs from the rest by its sepals not being toothed and more or less united at the base.





Local Notes:



Habitat: Floodplains of rivers, disturbed areas.

Habit: Tree up to 15 feet tall.

Stems: Trunks and twigs brown to black, smooth.

Leaves: Alternate, simple, nearly scale-like, up to 1/8 inch long.

Flowers: Many crowded into racemes up to 3 inches long; flowers borne on stalks about 1/16 inch long, subtended by a bract about 1/16 inch long.

Sepals: 5, green, more or less united at the base, up to 1/16 inch long.

Petals: 5, pink, free from each other, up to 1/16 inch long.

Stamens: 5.

Pistils: Ovary superior.

Fruits: Capsules ellipsoid, smooth; each seed with a tuft of hairs at the tip.

Notes: This species is native to China and Japan, but has escaped from cultivation into the floodplains of rivers and disturbed areas. Birds reportedly use this species for nesting.

Saltcedar

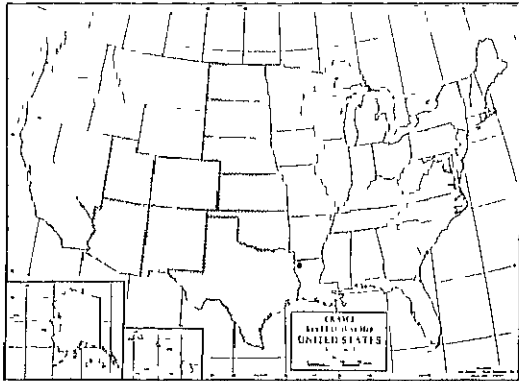
Tamarix ramosissima Ledeb.

Family: Tamarisk (Tamaricaceae)

March-April

Field Marks: The 5 sepals of this species are toothed, distinguishing this tamarisk from all others.





Local Notes:

Habitat: Moist areas in the desert.

Habit: Shrub or small tree to 20 feet tall, bark reddish brown

Stems: Erect, spreading, smooth.

Leaves: Alternate, scale-like, lanceolate to ovate-lanceolate, blue-green, sessile, up to 1/6 inch long, smooth

Flowers: Many borne in racemes that are arranged in open panicles, each raceme up to 2 inches long, each flower on a very short stalk, bracts about as long as or longer than the flower stalks.

Sepals: 5, green, free from each other, up to 1/16 inch long, toothed along the edges.

Petals: 5, pink, free from each other, obovate, 1/12-1/8 inch long.

Stamens: 5, attached beneath a disk in the flower.

Pistils: Ovary superior; styles 3

Fruits: Capsule narrowed into a beak, longer than the petals, with tuft of soft bristles at the tip.

Notes: This species in the past has been known as *T. pentandra*. It is native of Europe and Asia. It is sometimes grown as an ornamental.

GROUP 6

**Dicot Herbs with Some of
the Leaves Compound**

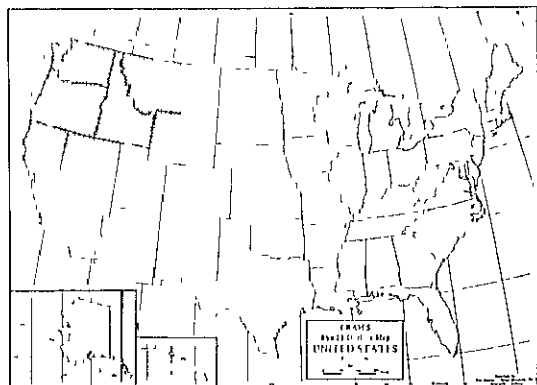
GROUP 6

**Dicot Herbs with Some of
the Leaves Compound**

Angelica arguta Nutt.

July-August

[illegible]



Local Notes:



Habitat: Wet woods, bogs.

Habit: Perennial herb with a stout taproot.

Stems: Stout, usually branched, to 6 feet tall, smooth or slightly rough to the touch.

Leaves: Alternate, 2- or 3-pinnately compound, the leaflets lanceolate to ovate, up to 6 inches long, up to 2 inches wide, more or less pointed at the tip, rounded at the base, toothed, smooth or slightly rough to the touch; leaf stalks up to 1 foot long.

Flowers: Many borne in several compound umbels, the rays of each umbel up to 4 inches long, the stalks of each flower up to 1/2 inch long, with a conspicuous web at the base

Sepals: Minute or absent.

Petals: 5, white, free from each other, up to 1/8 inch long.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Oval to obovate, up to 1/3 inch long, up to 1/4 inch broad, narrowly winged

Notes: The fruits are eaten by birds.

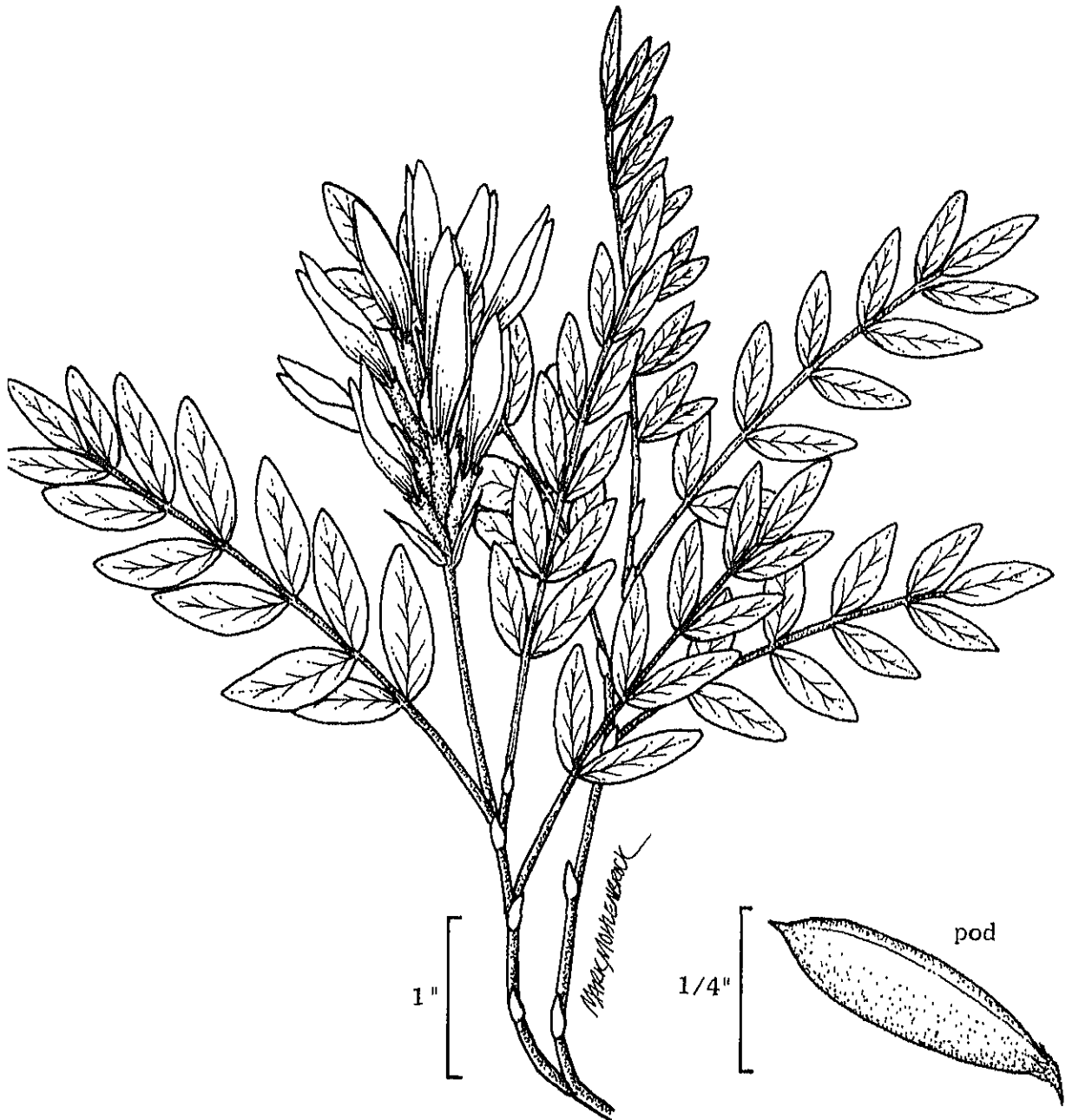
Field Milkvetch

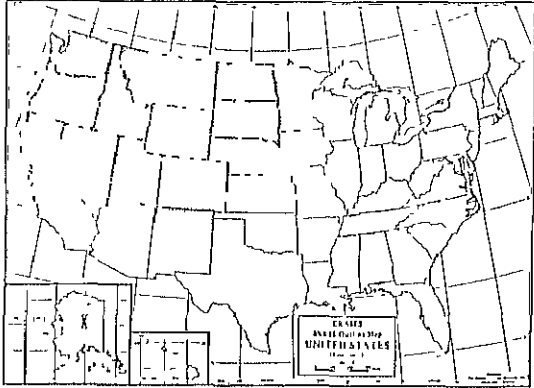
Astragalus agrestis Dougl. ex G. Don

Family: Pea (Leguminosae)

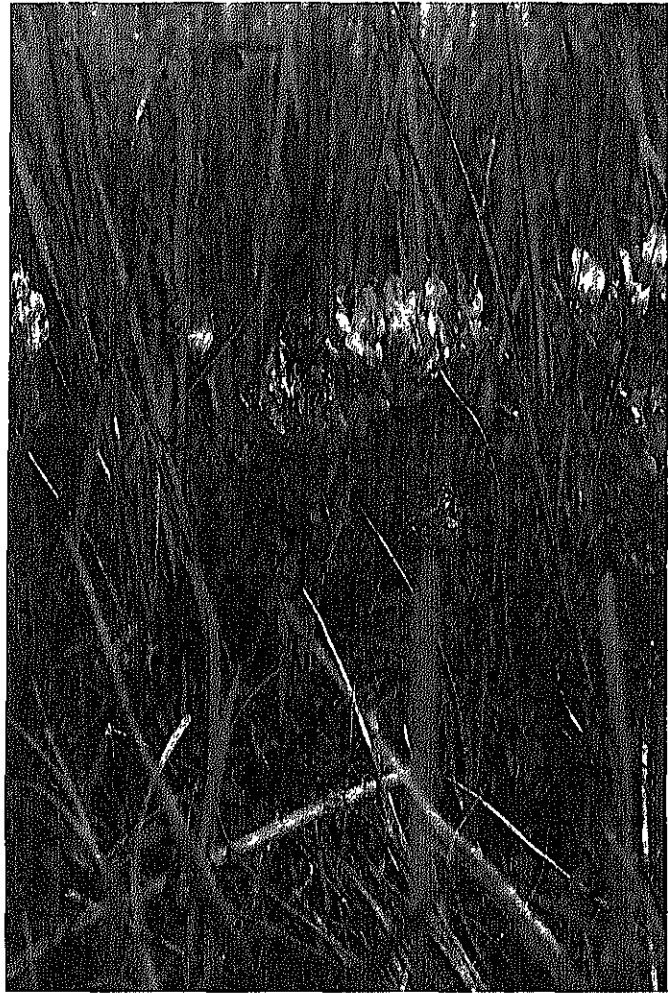
May-August

Field Marks: Of all the species of *Astragalus*, this species differs by its united stipules, and its large flowers that are 3/4-1 inch long and crowded into ovoid heads.





Local Notes:



Habitat: Pastures, hillsides, prairies, along roads.

Habit: Perennial herb with a taproot.

Stems: Upright, up to 15 inches tall, gray-hairy.

Leaves: Alternate, pinnately compound with 9-25 leaflets, each leaflet oblong to oblong-ovate, up to 1 1/2 inches long, up to 1/3 inch wide, pointed or rounded at the tip, tapering or rounded at the base, with appressed hairs; stipules united, up to 3/4 inch long.

Flowers: Up to 50 crowded into ovoid heads arising from the leaf axils, the heads up to 6 inches long; flower stalks about 1/20 inch long.

Sepals: 5, united below into a tube, up to 1/2 inch long, with black and white hairs.

Petals: 5, arranged in the form of a sweet pea flower, purple to pink to blue to even whitish, up to 1 inch long.

Stamens: 10.

Pistils: Ovary superior, minutely hairy.

Fruits: Pods up to 1/2 inch long, up to 1/6 inch wide, with appressed hairs, sessile; seeds smooth, brown, up to 1/8 inch long.

Notes: The hairiness of this species is extremely variable, as is the flower color.

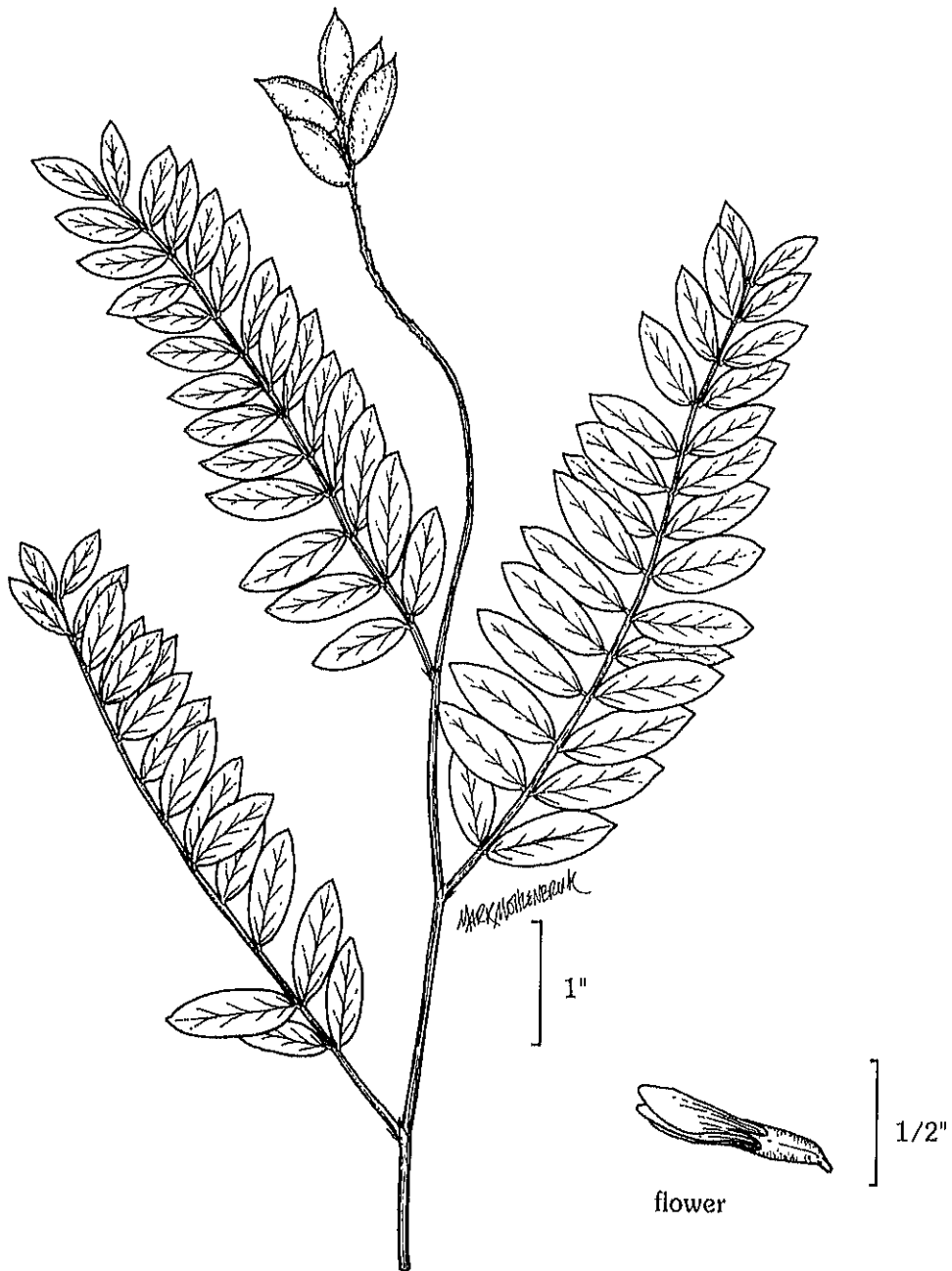
Canada Milkvetch

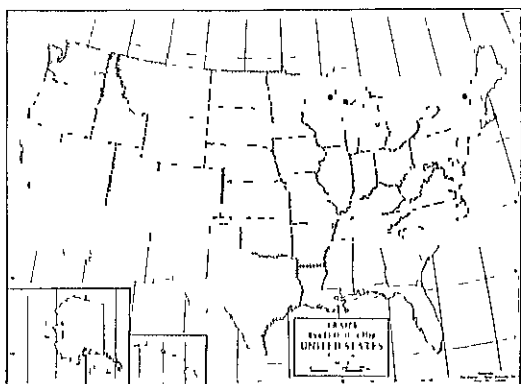
Astragalus canadensis L.

Family: Pea (Leguminosae)

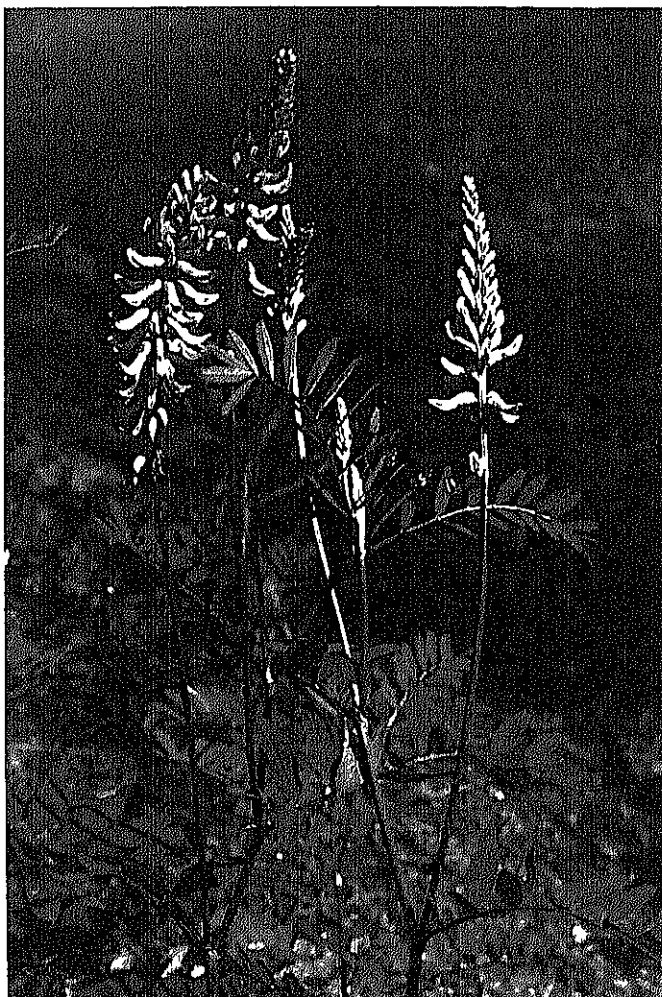
May-August

Field Marks: This species is distinguished by its pinnately compound leaves with 15-35 leaflets and by its greenish white to yellowish flowers 3/4-1 inch long. The terete pods are 1/2-3/4 inch long.





Local Notes:



Habitat: Along rivers and streams, moist prairies, open woods; also on dry bluffs.

Habit: Perennial herb with rhizomes.

Stems: Upright, usually branched, up to 3 feet tall, with appressed hairs.

Leaves: Alternate, pinnately compound, with 15-35 leaflets; leaflets lanceolate to ovate to elliptic, up to 1 3/4 inches long, pointed at the tip, tapering to the base, without teeth, appressed-hairy.

Flowers: Several borne in dense racemes, the racemes up to 8 inches long, the teeth 1/24-1/6 inch long, smooth or sparsely hairy.

Sepals: 5, green, united below to form a tube, the tube 1/6-1/3 inch long, the teeth 1/24-1/6 inch long, smooth or sparsely hairy.

Petals: 5, arranged to form a sweetpea-shaped flower, greenish white to yellowish, 3/4-1 inch long.

Stamens: 10.

Pistils: Ovary superior, usually smooth.

Fruits: Pods terete, 1/2-3/4 inch long, usually smooth, with a slender beak at the tip up to 1/6 inch long; seeds smooth, brown.

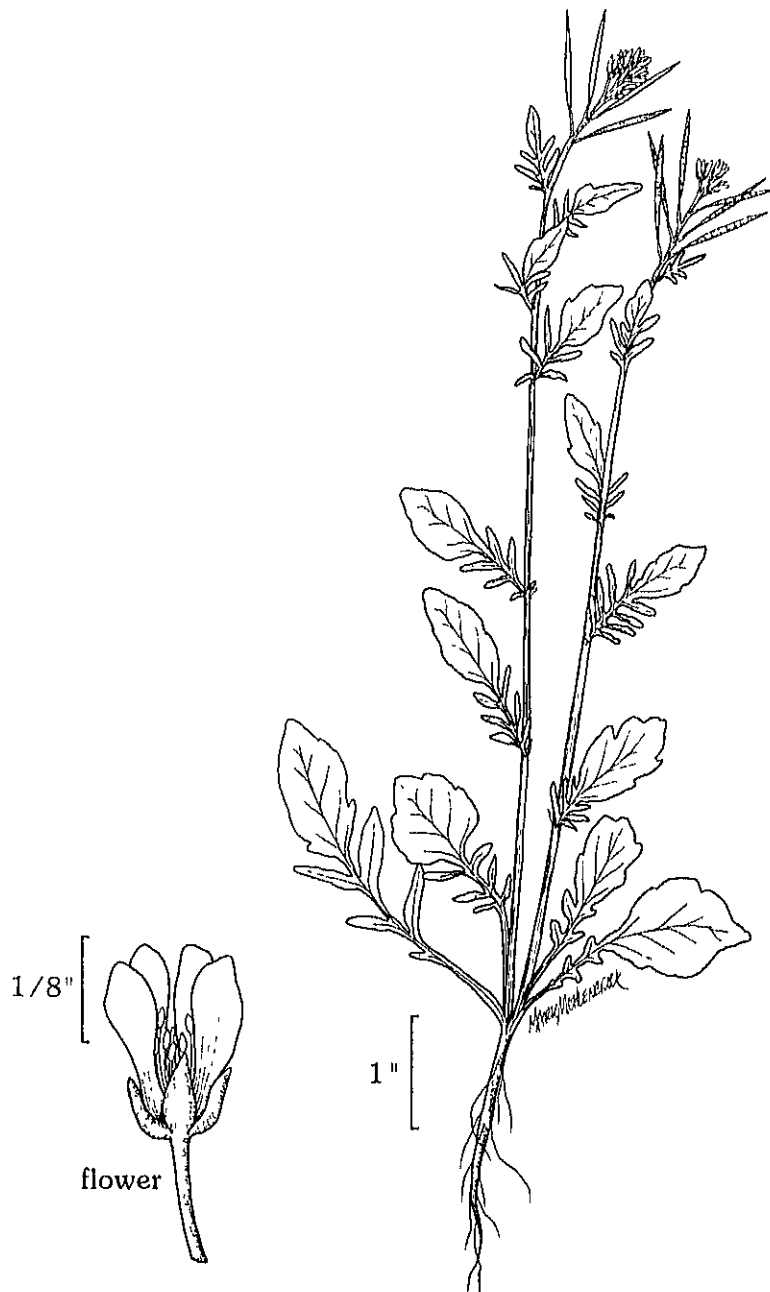
American Winter-cress

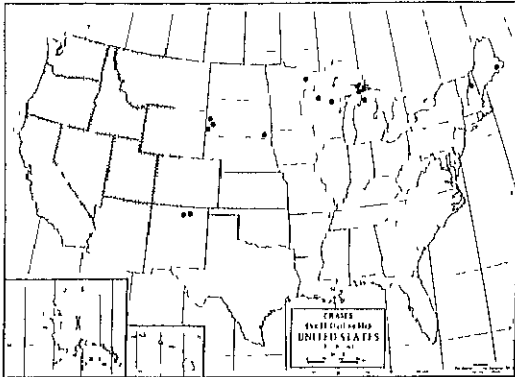
Barbarea orthoceras Ledeb.

Family: Mustard (Cruciferae)

March-October

Field Marks: This species is distinguished by its pale yellow petals, by some of its leaves pinnately divided with a very large terminal leaflet, and by its slender, ascending pods up to 2 inches long





Local Notes:



Habitat: Along streams, wet meadows, around springs.

Habit: Perennial herb with a thickened root.

Stems: Upright, branched, stout, up to 1 1/2 feet tall, smooth, sometimes purple-tinged.

Leaves: Basal and alternate, smooth, some of the basal leaves sometimes simple and undivided, the rest of the leaves pinnately divided, the terminal leaflet often several times larger than the other leaflets; uppermost leaves merely pinnately lobed.

Flowers: Several in a terminal raceme; flower stalks rather thick, 1/8-1/4 inch long.

Sepals: 4, yellow-green, free from each other, up to 1/8 inch long.

Petals: 4, pale yellow, free from each other, up to 1/4 inch long.

Stamens: 6.

Pistils: Ovary superior, smooth.

Fruits: Pods elongated, ascending, up to 2 inches long, up to 1/16 inch wide, smooth, with a short beak; seeds brown, about 1/24 inch long.

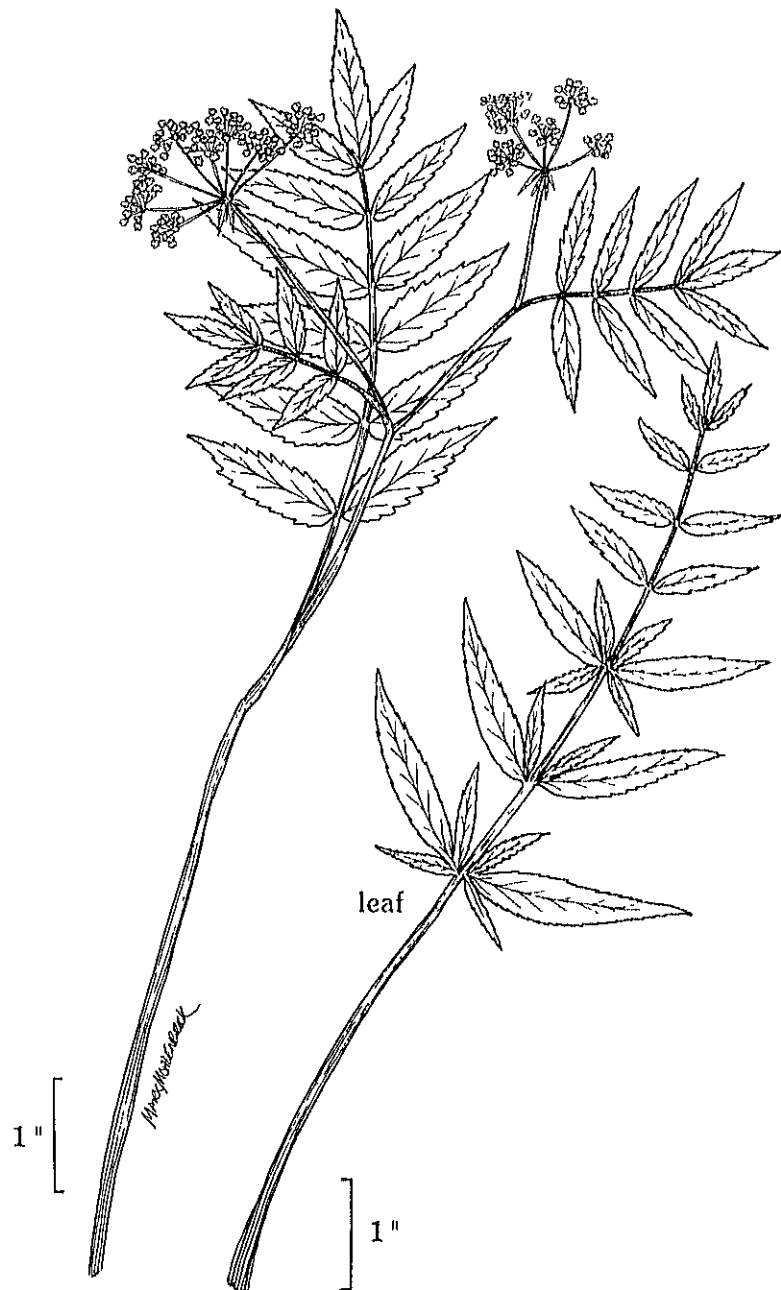
Cut-leaf Water Parsnip

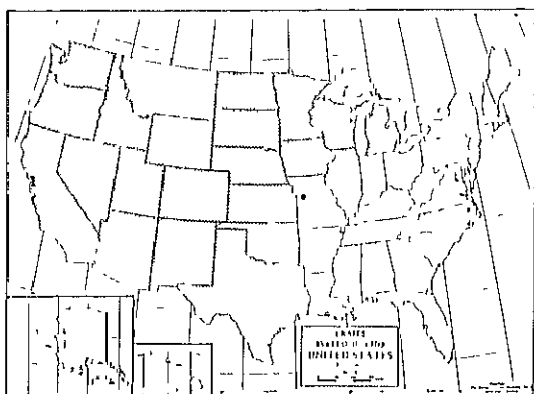
Berula erecta (Huds.) Coville

Family: Parsley (Umbelliferae)

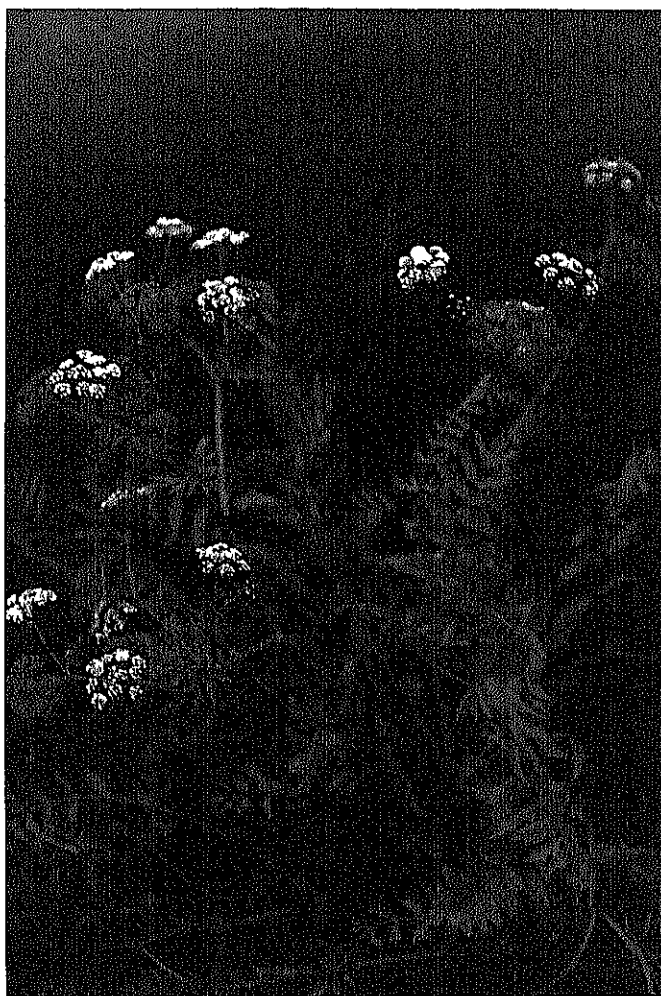
May-October

Field Marks: The distinguishing features of this species are the white flowers borne in compound umbels, and its pinnately compound leaves with 9-23 oblong leaflets up to 3/4 inch wide with at least the uppermost deeply jagged lobed





Local Notes:



Habitat: Swamps, springs, bogs, sometimes in shallow water.

Habit: Upright or reclining perennial herb with clusters of thickened roots.

Stems: Upright or reclining, branched, up to 3 feet long, smooth.

Leaves: Alternate, pinnately compound with 9-23 leaflets, each leaflet oblong, up to 3/4 inch wide, with or without teeth, but those of the upper leaves deeply jagged lobed, smooth.

Flowers: Many borne in compound umbels up to 3 inches across, the umbels with as many as 20 rays; bracts 4-8, linear; flower stalks up to 1/4 inch long.

Sepals: 5, green, minute.

Petals: 5, free from each other, white, up to 1/16 inch long.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Ovoid, flattened laterally, up to 1/10 inch long, smooth.

Notes: This species in the past has been called *Berula pusilla*.

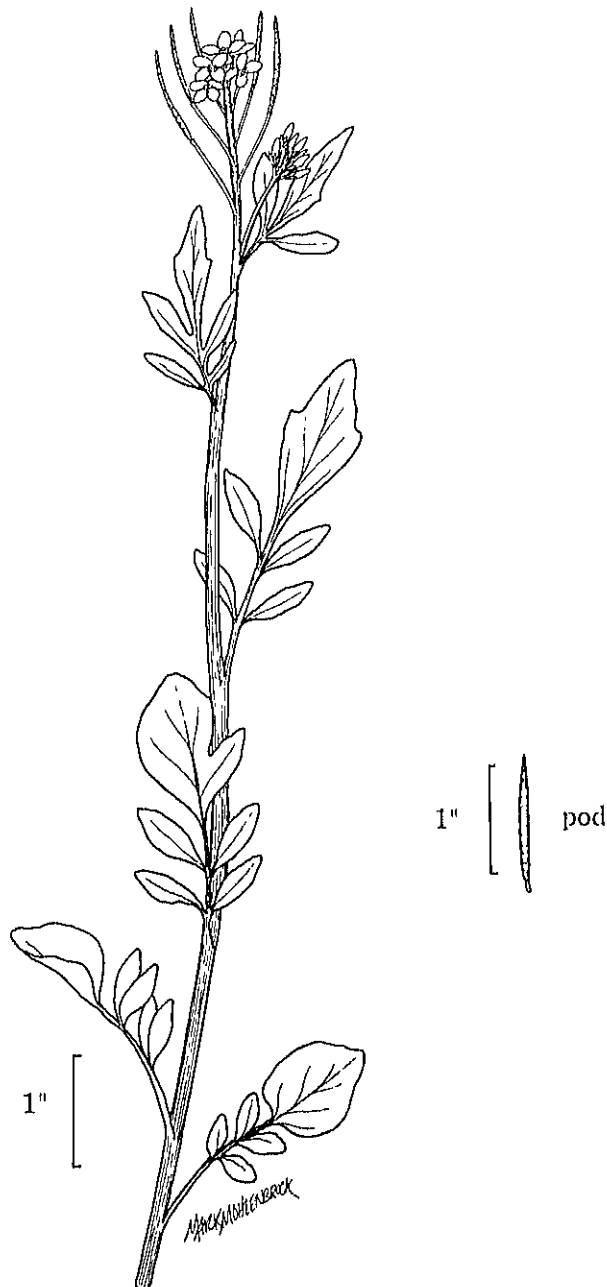
Brewer's Bitter-cress

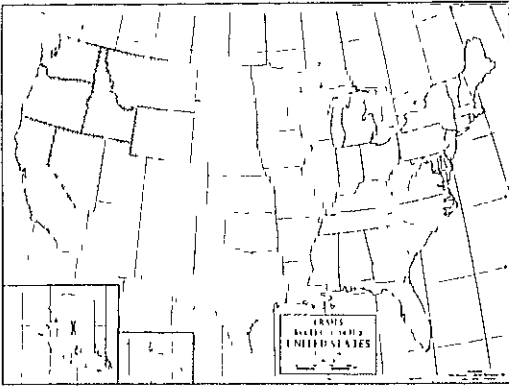
Cardamine breweri S. Wats.

Family: Mustard (Cruciferae)

May-July

Field Marks: This species is readily recognized by its simple lower leaves and its pinnately compound upper leaves





Local Notes:



Habitat: Along streams in the mountains

Habit: Perennial herb with slender, creeping rootstocks

Stems: Spreading and rooting at the nodes or upright, usually unbranched, up to 2 feet tall, smooth or sparsely hairy.

Leaves: Basal leaves usually simple, ovate, pointed at the tip, heart-shaped at the base, smooth or nearly so, up to 2 inches long, usually without teeth, on a long stalk, upper leaves alternate, pinnately compound with 3-5 leaflets, the leaflets ovate, shallowly lobed or wavy-toothed, the lateral leaflets smaller than the terminal one, smooth or nearly so

Flowers: Several in an uncrowded raceme, each flower on a stalk 1/4-3/4 inch long

Sepals: 4, green, free from each other, about 1/12 inch long

Petals: 4, white, free from each other, up to 1/4 inch long

Stamens: 6

Pistils: Ovary superior, smooth

Fruits: Pods elongated, ascending to erect, smooth, up to 1 inch long, less than 1/16 inch wide, with 10-20 nearly spherical seeds.

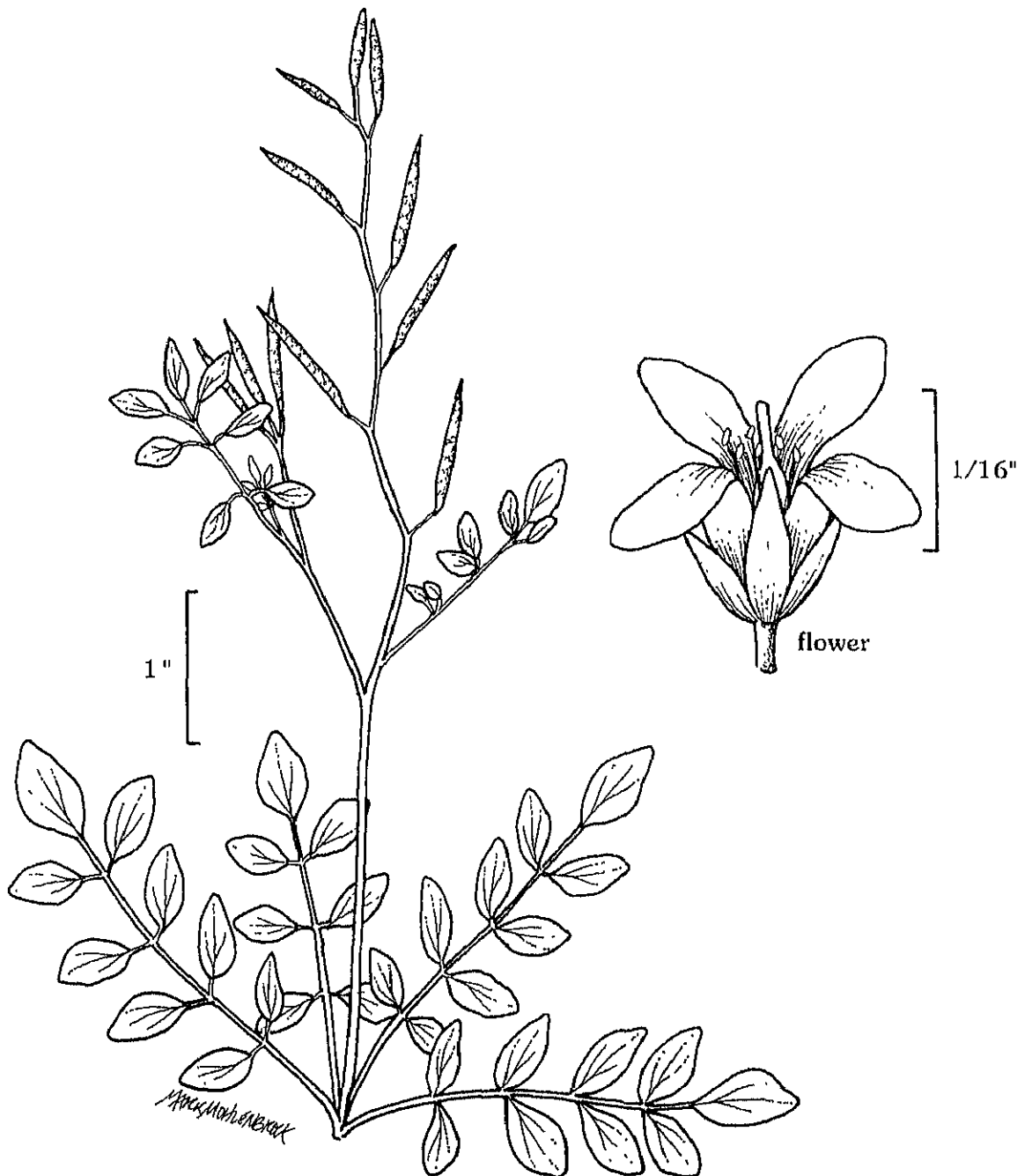
Few-seed Bitter-cress

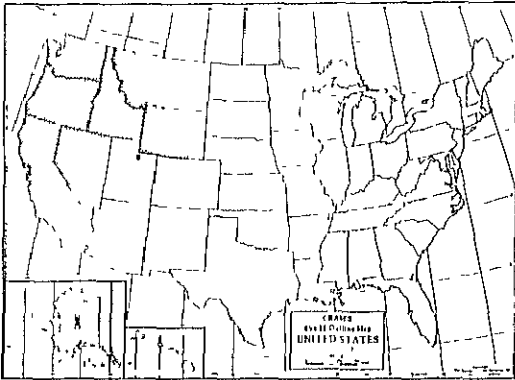
Cardamine oligosperma Nutt.

Family: Mustard (Cruciferae)

March-July

Field Marks: This bitter-cress differs from all others by being an annual with white petals up to 1/8 inch long and at least some of the leaflets nearly spherical.





Local Notes:

Habitat: Moist woods.

Habit: Annual (less commonly biennial) herb with a taproot.

Stems: Upright, usually unbranched, up to 20 inches tall, with short, spreading hairs or smooth.

Leaves: Mostly basal in a rosette, with a few alternate leaves on the stem, pinnately compound with 5-11 leaflets, the leaflets oval to nearly round, up to 1/3 inch long, with or without lobes or teeth, short-hairy or smooth, on distinct stalks; leaflets of stem leaves much narrower.

Flowers: 2-10 in a terminal raceme, without bracts.

Sepals: 4, green, free from each other, up to 1/24 inch long.

Petals: 4, white, free from each other, spatulate, up to 1/8 inch long.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Pods very upright, elongated, very narrow, up to 1 inch long; seeds winged.

Notes: The leaves are sometimes browsed by deer.

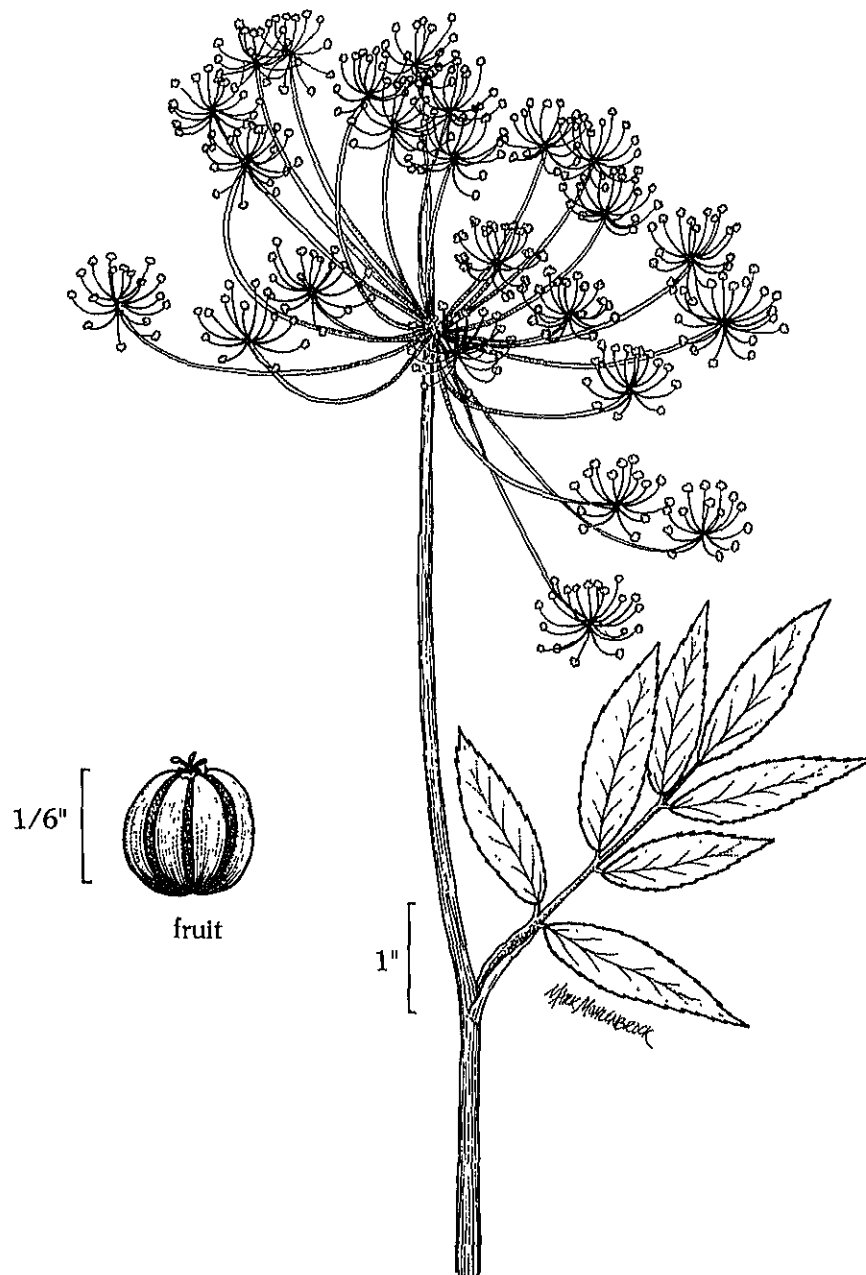
Western Water-hemlock

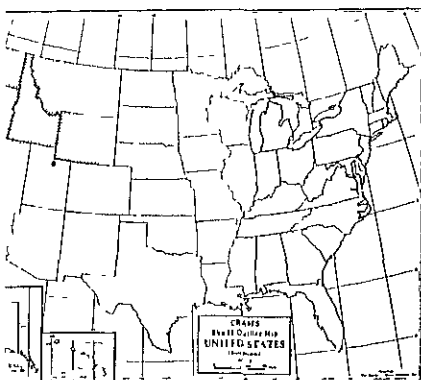
Cicuta douglasii (DC.) Coult. & Rose

Family: Carrot (Umbelliferae)

June-September

Field Marks: This species has large, much divided, alternate leaves and large umbels of white flowers. The smooth fruits are ovoid to nearly spherical.





Notes:

Habitat: Moist woods.

Habit: Annual (less commonly biennial) herb with a taproot.

Stems: Upright, usually unbranched, up to 20 inches tall, with short, spreading hairs or smooth.

Leaves: Mostly basal in a rosette, with a few alternate leaves on the stem, pinnately compound with 5-11 leaflets, the leaflets oval to nearly round, up to 1/3 inch long, with or without lobes or teeth, short-hairy or smooth, on distinct stalks; leaflets of stem leaves much narrower.

Flowers: 2-10 in a terminal raceme, without bracts.

Sepals: 4, green, free from each other, up to 1/24 inch long.

Petals: 4, white, free from each other, spatulate, up to 1/8 inch long.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Pods very upright, elongated, very narrow, up to 1 inch long; seeds winged.

Notes: The leaves are sometimes browsed by deer.

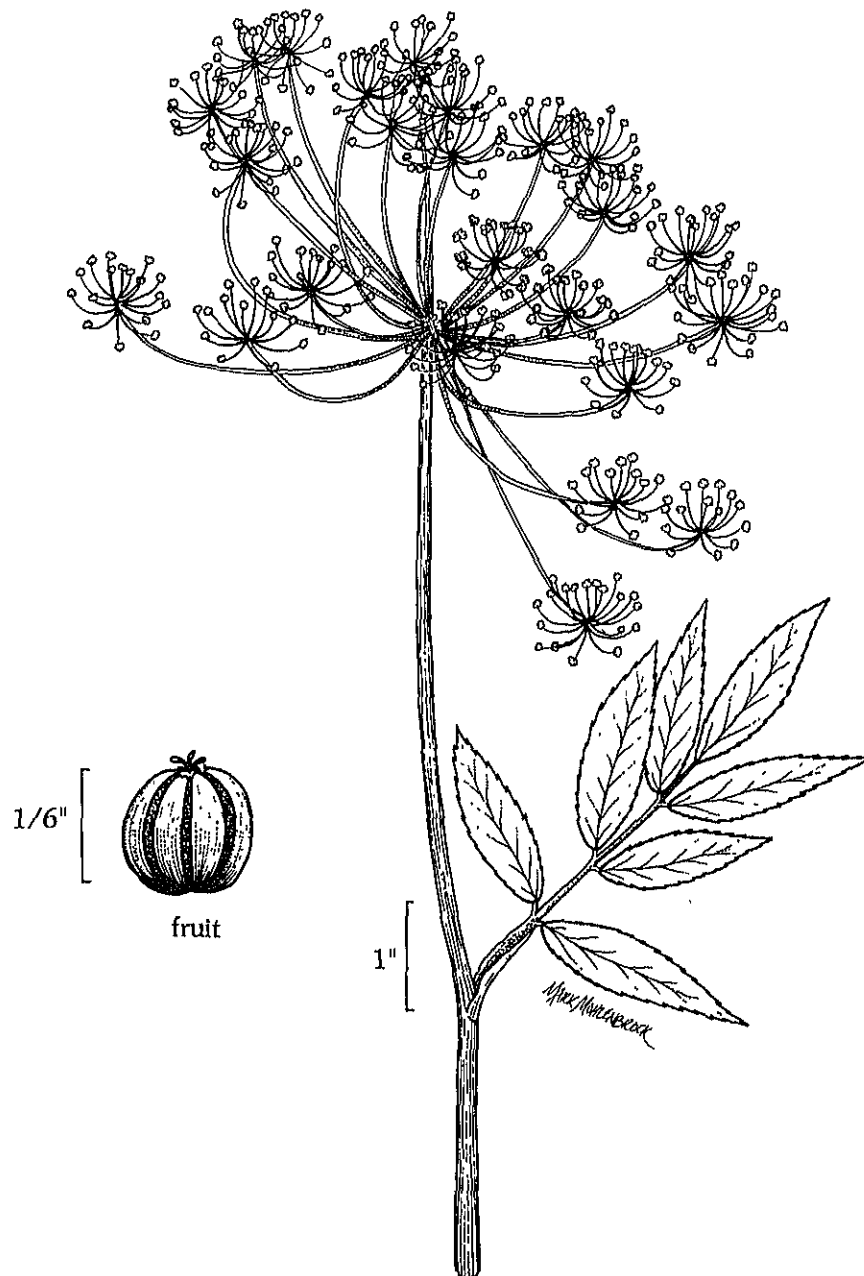
Western Water-hemlock

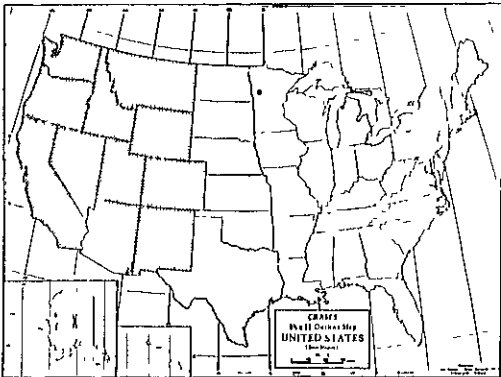
Cicuta douglasii (DC.) Coult. & Rose

Family: Carrot (Umbelliferae)

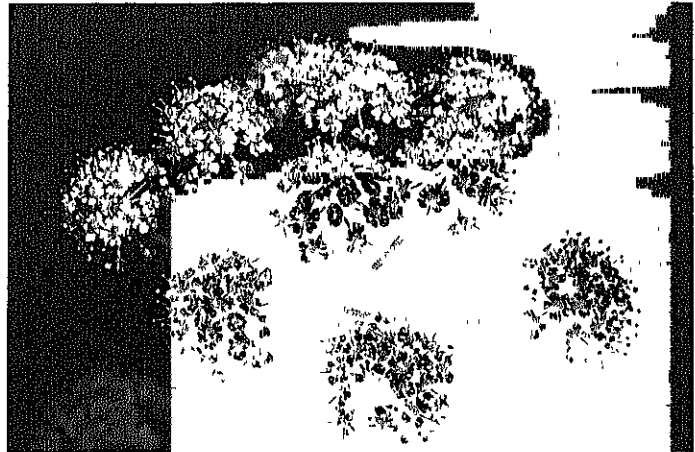
June-September

Field Marks: This species has large, much divided, alternate leaves and large umbels of white flowers. The smooth fruits are ovoid to nearly spherical.





Local Notes:



Habitat: Swamps, wet roadside ditches.

Habit: Stout perennial herb with an enlarged rootstock.

Stems: Upright, stout, branched, up to 6 feet tall, smooth.

Leaves: Alternate, much divided, sometimes at least 3-pinnate, the leaflets narrowly lanceolate, up to 4 inches long, toothed or even shallowly lobed, smooth.

Flowers: Many borne in large umbels, the umbels up to 4 inches across; each umbel sometimes subtended by 1 or more bracts

Sepals: 5, green, very tiny.

Petals: 5, white, free from each other, about 1/10 inch long.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Ovoid or nearly spherical, up to 1/6 inch long, smooth but with low ribs.

Notes: All parts of this plant are poisonous if eaten.

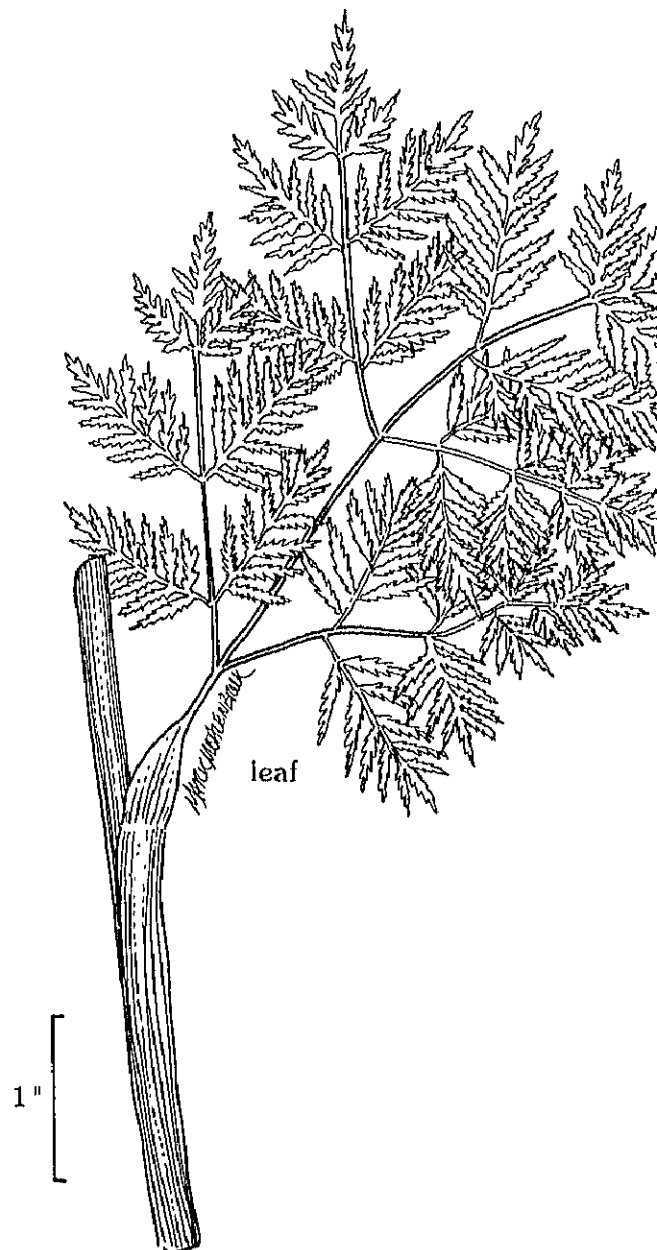
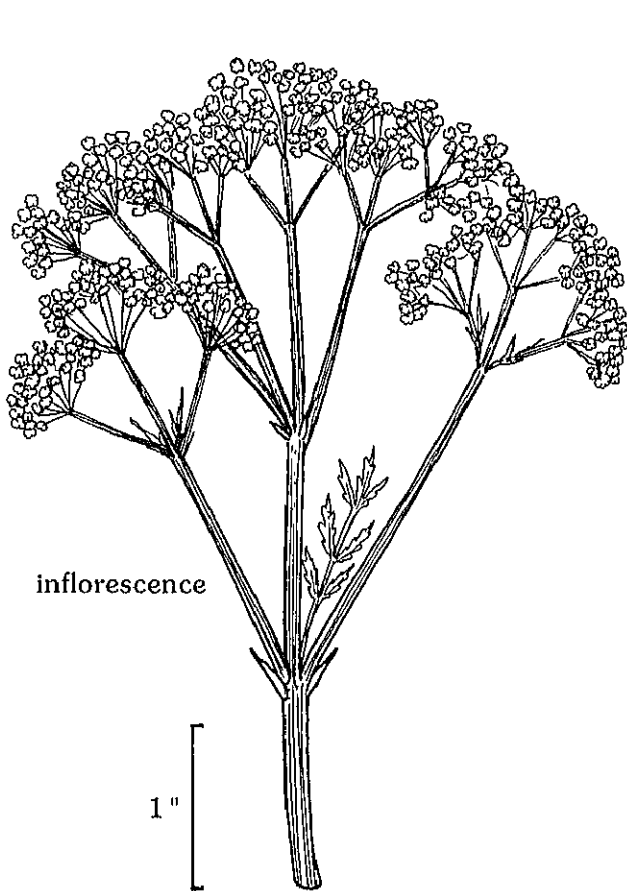
Poison-hemlock

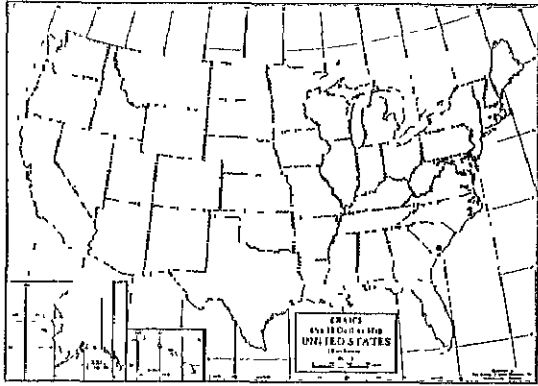
Conium maculatum L.

Family: Parsley (Umbelliferae)

April-July

Field Marks: This species is distinguished by its tall stature up to 10 feet tall, its umbels of white flowers, its purple-spotted stems, and its much-divided leaflets less than 1/2 inch wide.





Local Notes:



Habitat: Wet disturbed areas, particularly in roadside ditches.

Habit: Robust biennial herb with a taproot.

Stems: Upright, stout, branched, up to 10 feet tall, purple-spotted, smooth.

Leaves: Alternate, 3- to 4-pinnately compound, up to 18 inches long, finely divided into leaflets up to 1/2 inch wide, each leaflet deeply toothed or lobed, smooth.

Flowers: Borne in umbels, with many umbels per plant, each umbel up to 3 inches across, subtended by small lanceolate bracts

Sepals: 0.

Petals: 5, free from each other, white.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Ovoid, compressed laterally, up to 1/8 inch long, smooth, with pale brown ribs.

Notes: All parts of this plant are extremely poisonous when eaten. It is native to Europe and Asia.

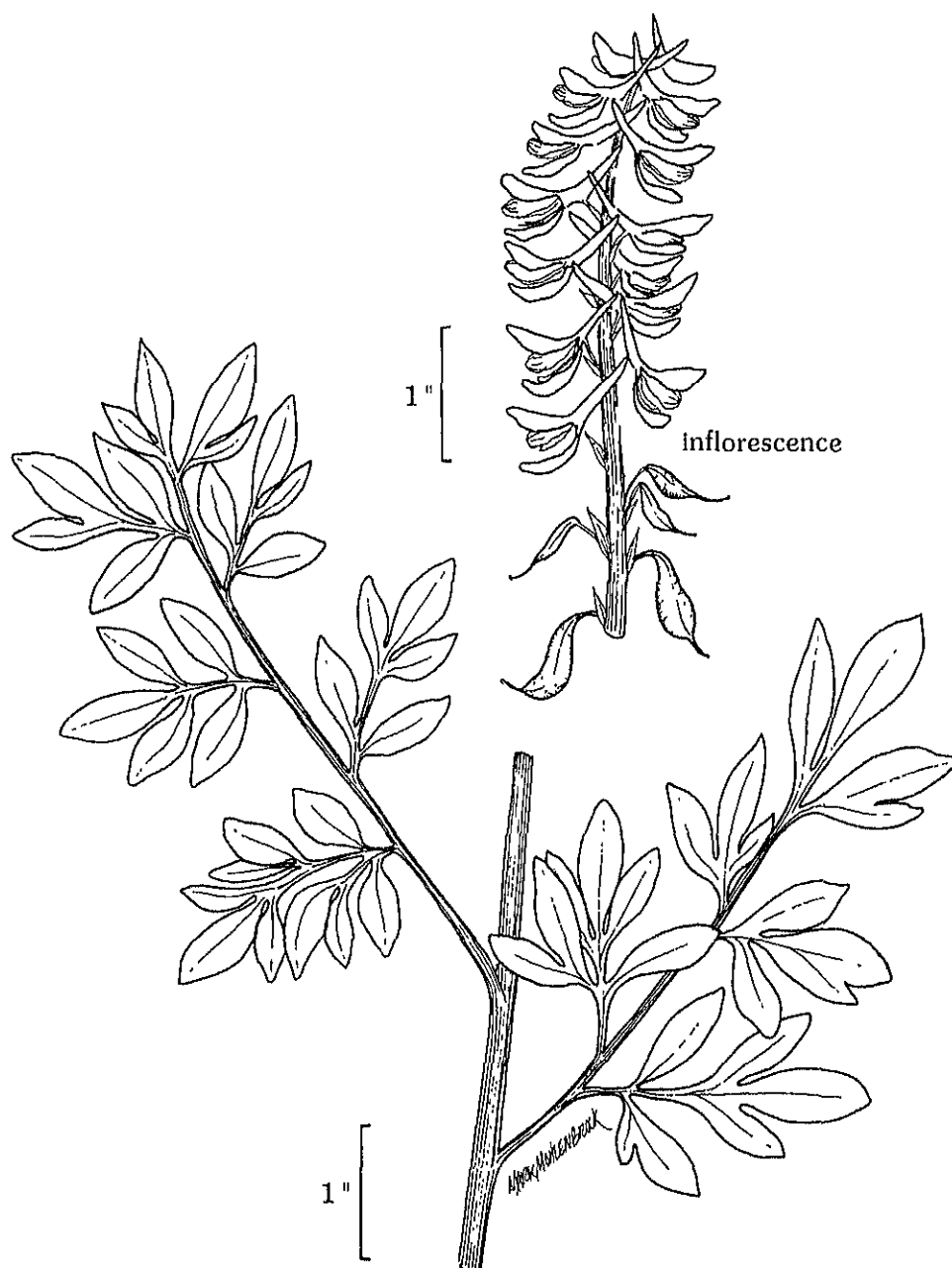
Sierra Corydalis

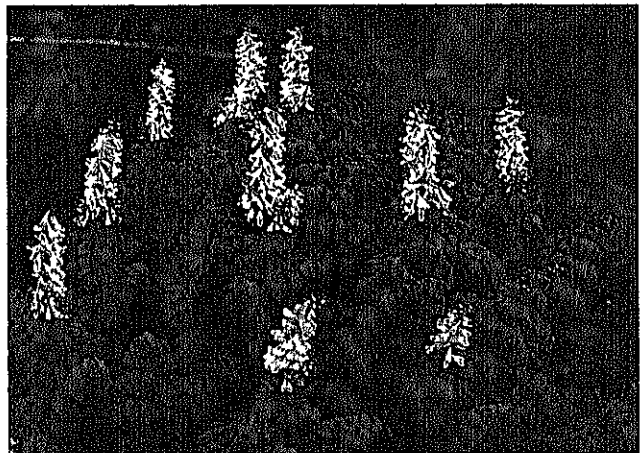
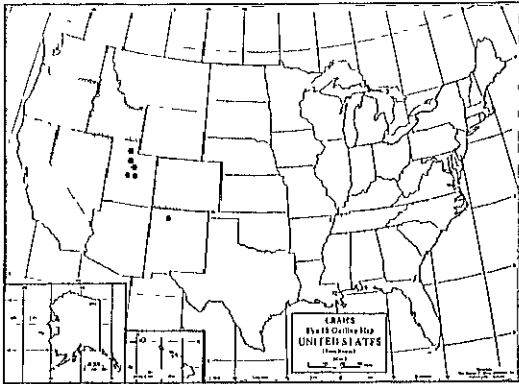
Corydalis caseana Gray

Family: Poppy (Papaveraceae)

June-August

Field Marks: The distinguishing features of the *Corydalis* are its white or pink flowers that are purple-tipped.





Local Notes:

Habitat: Along streams, in shaded woods.

Habit: Perennial herb with thickened roots.

Stems: Upright, stout and rather succulent, up to 1 foot long, each leaflet elliptic to lanceolate to ovate, pointed at the tip, tapering to the base, smooth, up to 1 inch long, without teeth.

Leaves: Alternate, doubly pinnately compound, up to 1 foot long, each leaflet elliptic to lanceolate, pointed at the tip, tapering to the base, smooth, up to 1 inch long,

up to 5 inches long, each flower on a short stalk.

Other, falling away early.

Petal tips, up to 2/3 inch long, one of the petals spurred.

Persistent on the fruit.

3/4 inch long, smooth, with numerous black, shiny,

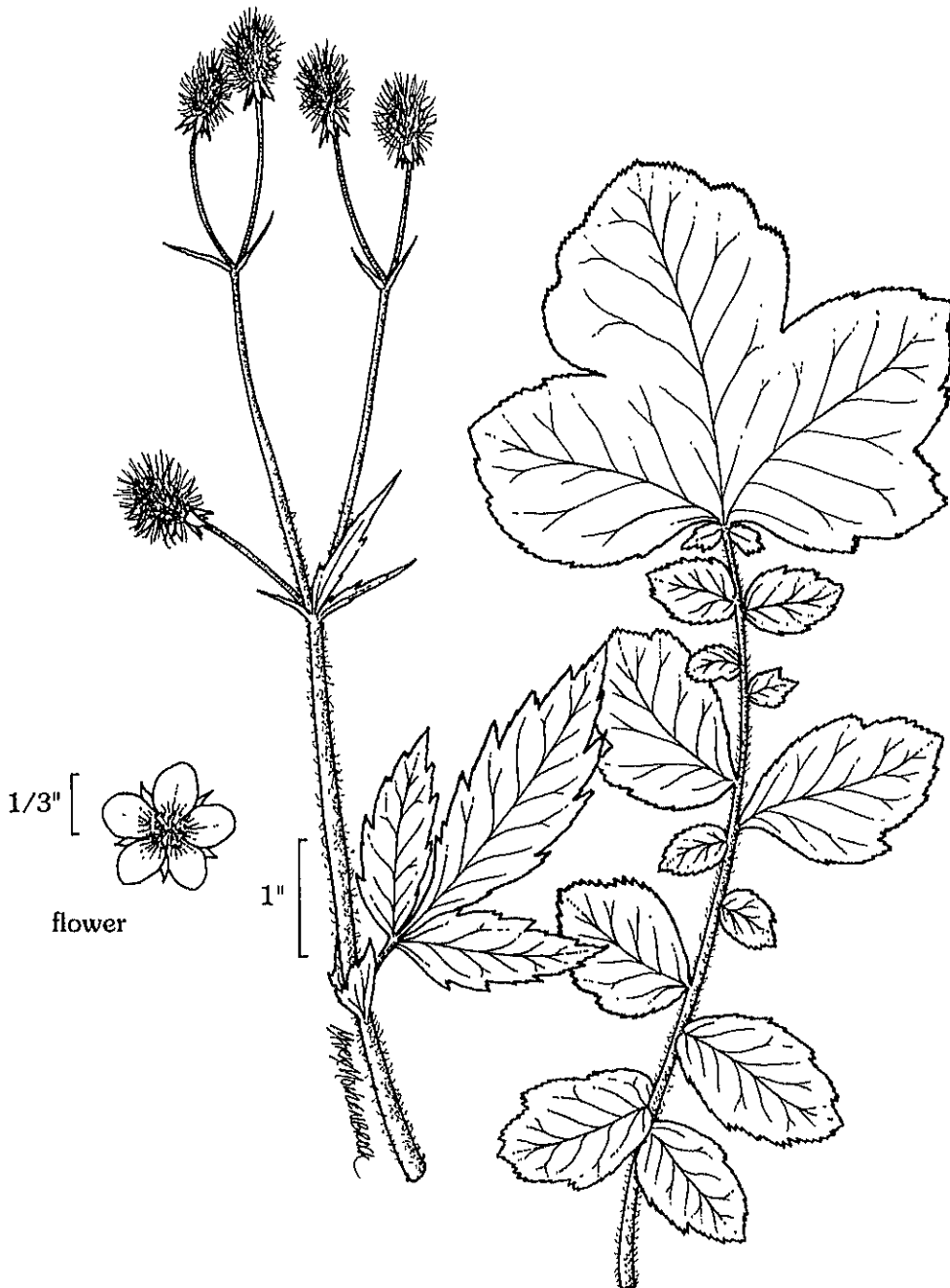
Large-leaf Avens

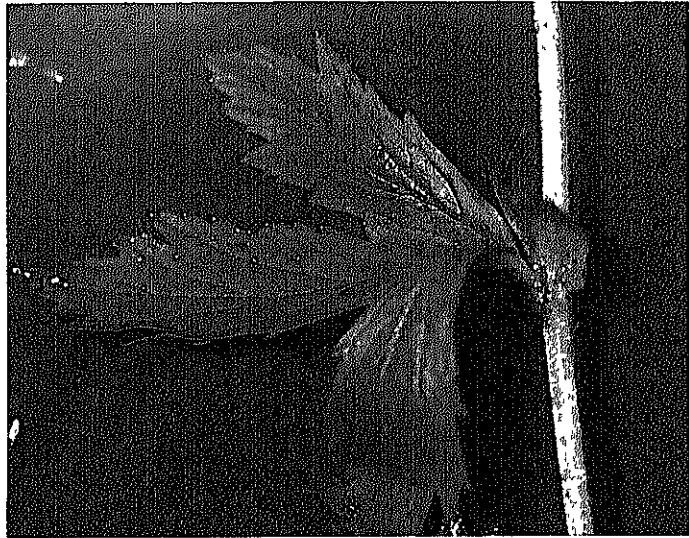
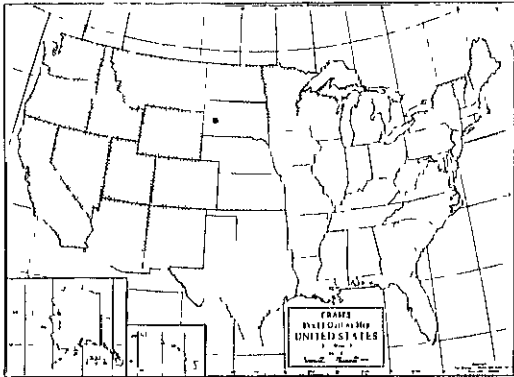
Geum macrophyllum Willd.

Family: Rose (Rosaceae)

June-August

Field Marks: All species of *Geum* have pinnately divided leaves and round, spiny fruits. This one differs from all others by its yellow flowers and its extremely large terminal part of the basal leaves.





Local Notes:

Habitat: Along streams, in moist woods.

Habit: Perennial herb with a short, thick rootstock and narrow stolons.

Stems: Upright, up to 2 feet tall, usually unbranched, with spreading hairs, some of which may be gland-tipped.

Leaves: Basal leaves pinnately divided, up to 12 inches long, the terminal segment much larger than the lateral segments, with spreading hairs; stem leaves deeply 3-lobed or divided into 3 leaflets, smaller than the basal leaves, with spreading hairs.

Flowers: Several in cymes, each flower on a sometimes glandular stalk.

Sepals: 5, green, up to 1/4 inch long, turned downward, hairy, sometimes glandular.

Petals: 5, free from each other, yellow, up to 1/3 inch long.

Stamens: Numerous.

Pistils: Several, free from each other.

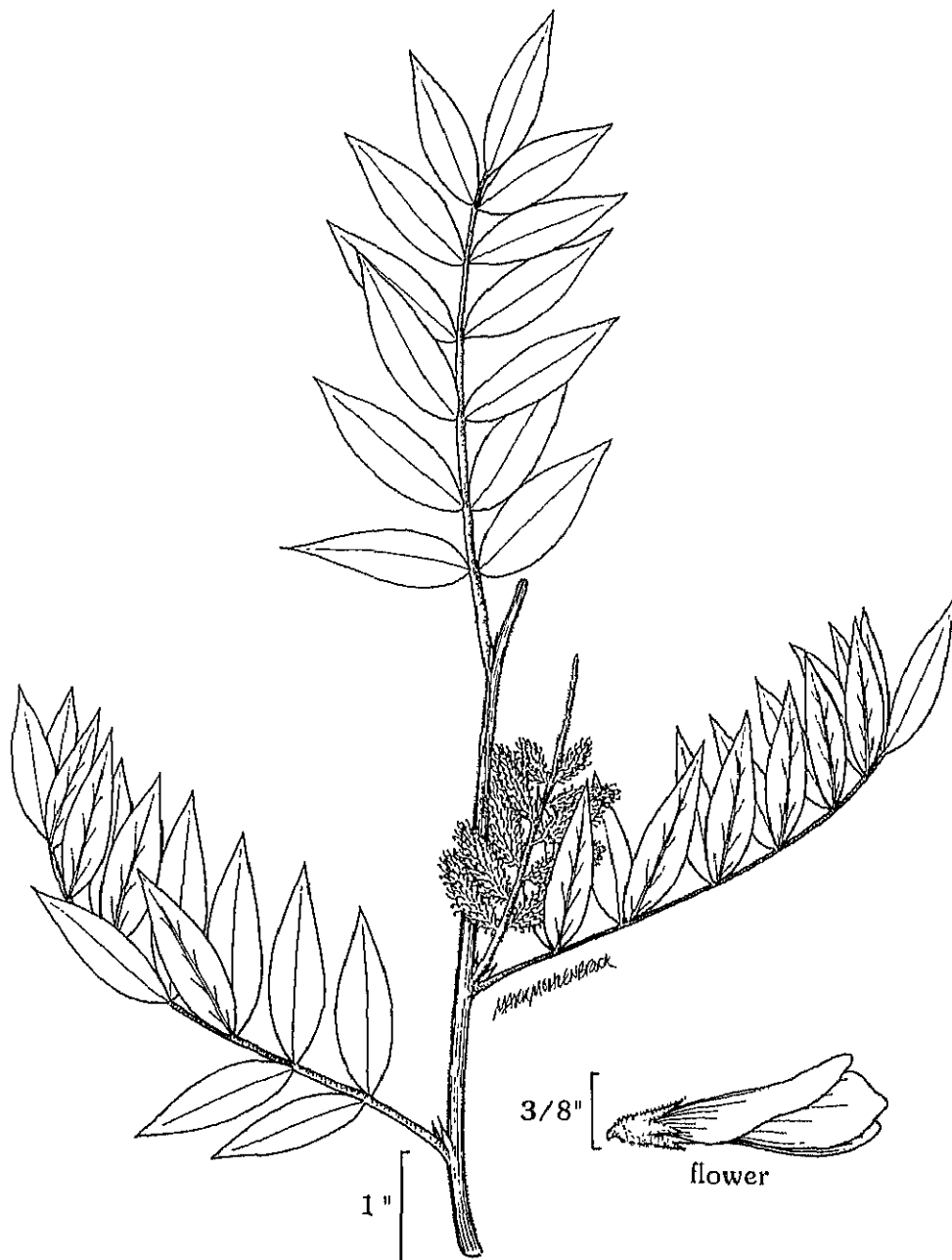
Fruits: Spherical, up to nearly 1 inch in diameter, consisting of several achenes, each achene elliptic, flattened, up to 1/6 inch long, with the persistent style forming a terminal spine, the entire head appearing prickly.

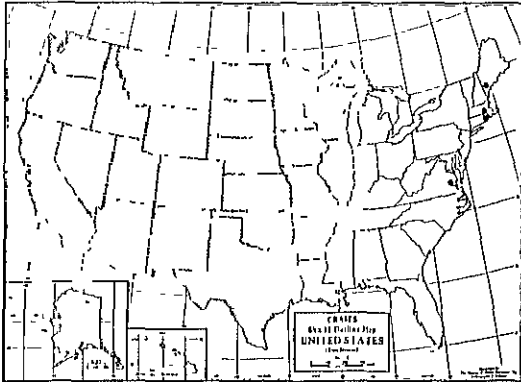
American Licorice
Glycyrrhiza lepidota Pursh

Family: Pea (Leguminosae)

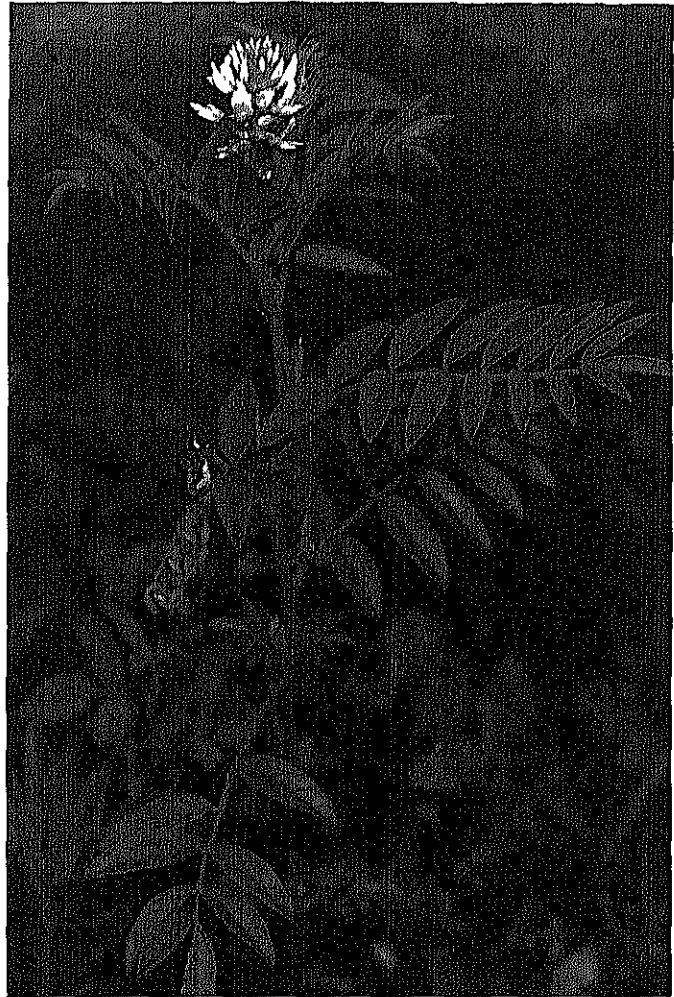
May-August

Field Marks: This member of the pea family has 11-19 toothless leaflets, a spike of yellowish white flowers, and pods covered with hooked prickles.





Local Notes:



Habitat: Low ground, particularly in disturbed areas.

Habit: Perennial herb with thick, licorice-scented roots.

Stems: Upright, branched, usually somewhat sticky-hairy, less commonly smooth, up to 3 feet tall.

Leaves: Alternate, pinnately compound with 11-19 leaflets, the leaflets lanceolate to oblong, up to 1 1/2 inches long, pointed at the tip, tapering to the base, without teeth, smooth or minutely hairy; stipules linear-lanceolate, 1/6-1/4 inch long.

Flowers: Many in a spike, the spike oblongoid, up to 2 1/2 inches long, shorter than the leaves.

Sepals: 5, green, attached to each other, the upper 2 shorter than the lowest 3, up to 1/4 inch long, glandular.

Petals: 5, arranged in the form of a sweetpea flower, yellowish white, 1/3-1/2 inch long.

Stamens: 10.

Pistils: Ovary superior.

Fruits: Pods oblongoid, 1/2-3/4 inch long, covered with short hooked prickles; seeds flat, brown, up to 1/8 inch long.

Notes: The prickly pods resemble the fruit of a cocklebur. They become entangled in the fur of mammals and are dispersed in that manner.

California Water-leaf

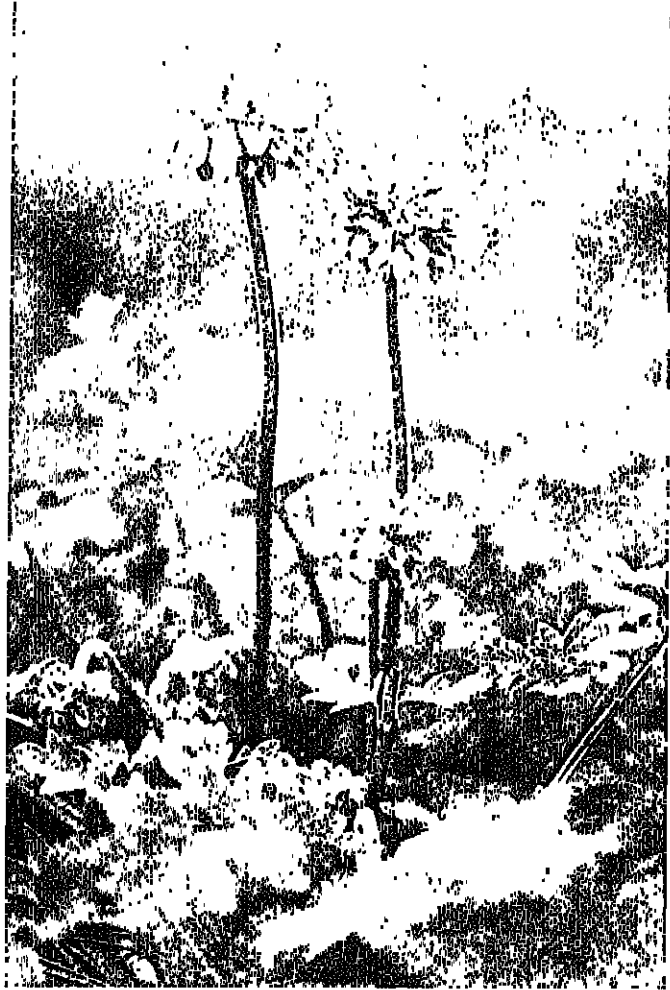
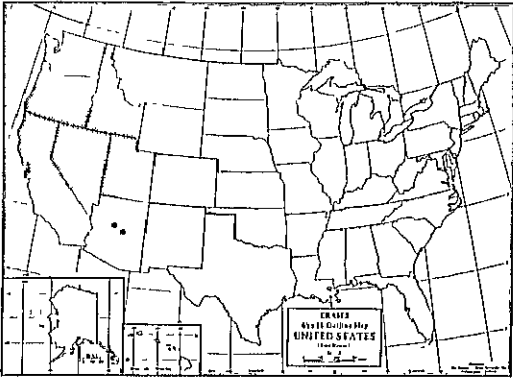
Hydrophyllum occidentale (S.Wats.) Gray

Family: Water-leaf (Hydrophyllaceae)

April-June

Field Marks: This species is distinguished by its coarsely toothed leaf segments, with only 2-4 teeth on each side, and by its cymes of blue flowers which stand above the leaves





Local Notes:

Habitat: Moist woods and thickets, from foothills to mid-mountain elevations

Habit: Perennial herb with rhizomes and fleshy roots.

Stems: Upright, often branched near the base, up to 1 1/2 feet tall, with spreading hairs.

Leaves: Basal and alternate, pinnately divided into 7-15 segments; each segment up to 1 1/2 inches wide, pointed at the tip, with 2-4 coarse teeth on each side, with spreading hairs.

Flowers: Borne in crowded, rounded cymes elevated above the leaves, the inflorescence on hairy stalks up to 6 inches long; individual flower stalks up to 1/4 inch long.

Sepals: 5, green, united below, 1/8-1/6 inch long, hairy and ciliate.

Petals: 5, blue-violet or even white, united to form a bell, 1/4-1/2 inch long, usually with a very shallow notch at the tip.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior; style 2-cleft

Fruits: Capsules ovoid, about 1/6 inch wide, containing 1-3 seeds

Notes: There is variation in the degree of hairiness in this species.

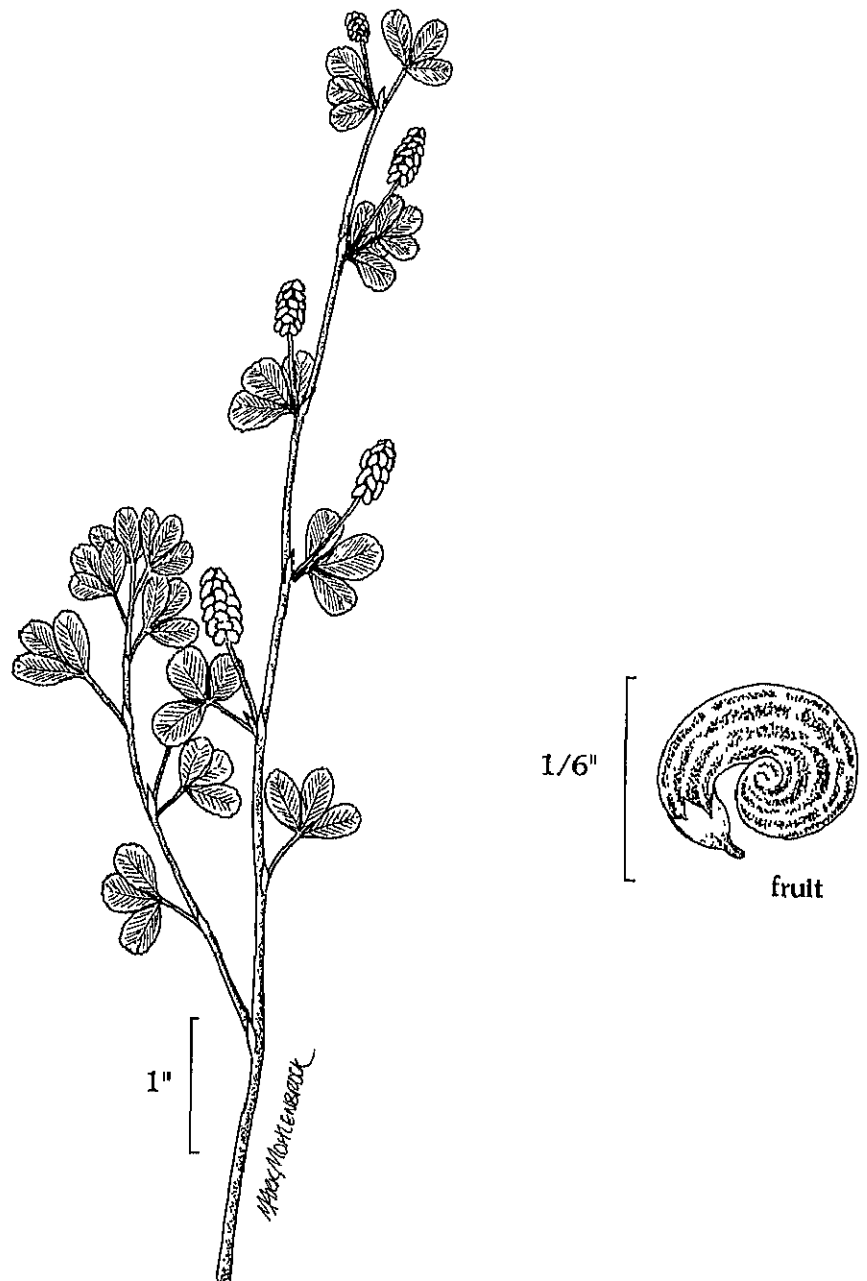
Black Medic

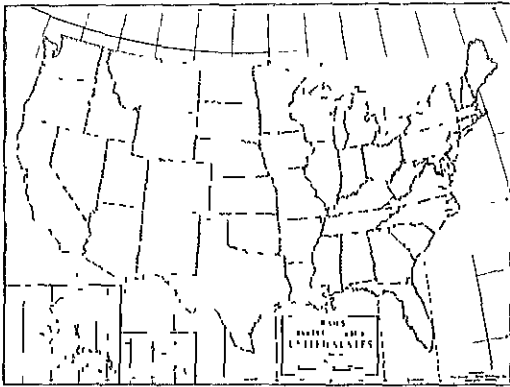
Medicago lupulina L.

Family: Pea (Leguminosae)

April-November

Field Marks: This species is recognized by its trifoliate leaves and its small heads of yellow flowers that drop their petals before the fruits are mature.





Local Notes:

Habitat: Old fields, pastures, roadsides, disturbed areas.

Habit: Annual or less commonly a perennial herb with a taproot.

Stems: Spreading, much branched from the base, up to 2 feet long, usually with some degree of hairiness.

Leaves: Alternate, trifoliate, with conspicuous stipules at their base; leaflets obovate to nearly spherical, up to 3/4 inch long, rounded or slightly notched at the tip but usually with a small projection, with or without teeth, usually hairy.

Flowers: 10 or more in spherical heads, the heads ovoid to cylindric, up to 1/4 inch in diameter, on stalks up to 1 inch long

Sepals: 5, green, united below, hairy, 1/12-1/10 inch long.

Petals: 5, yellow, 1/8-1/6 inch long, with the configuration of a sweetpea flower, falling away before the fruits mature.

Stamens: 10.

Pistils: Ovary superior, smooth.

Fruits: Pods wider than tall, black, veiny, up to 1/6 inch long, 1-seeded; seed greenish brown to brown to black.

Notes: This species is native of Europe but has spread to most parts of the United States. Some plants have glandular hairs on their leaves, stems, and pods. This species is an important plant for grazing animals.

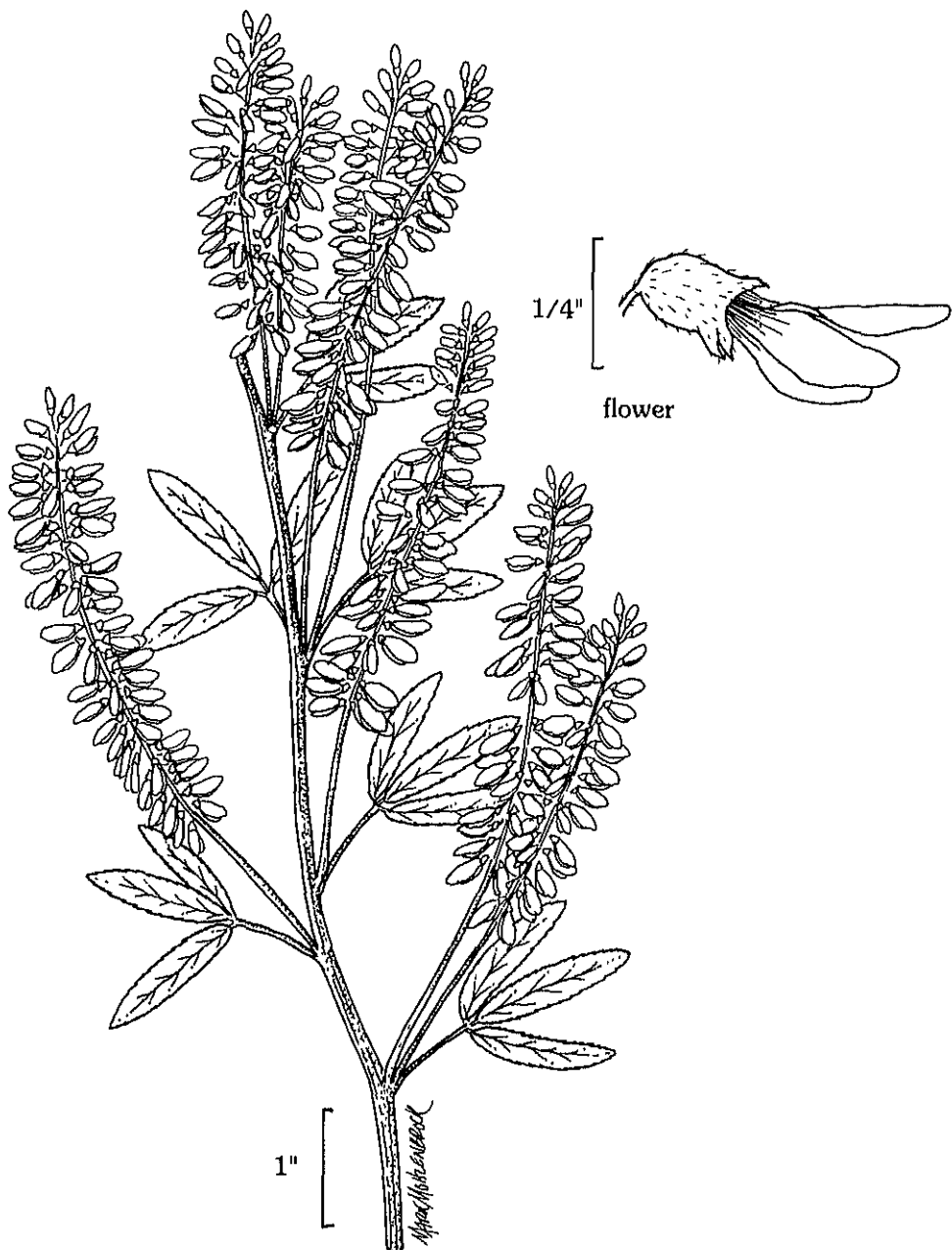
White Sweetclover

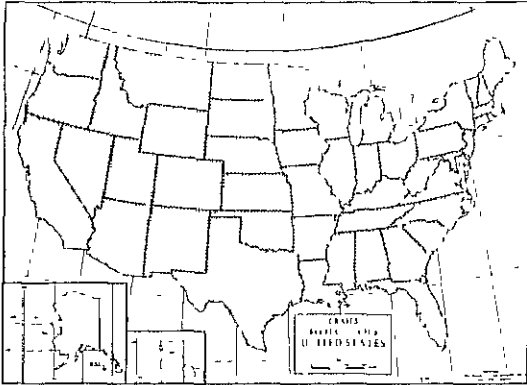
Melilotus alba Medik.

Family: Pea (Leguminosae)

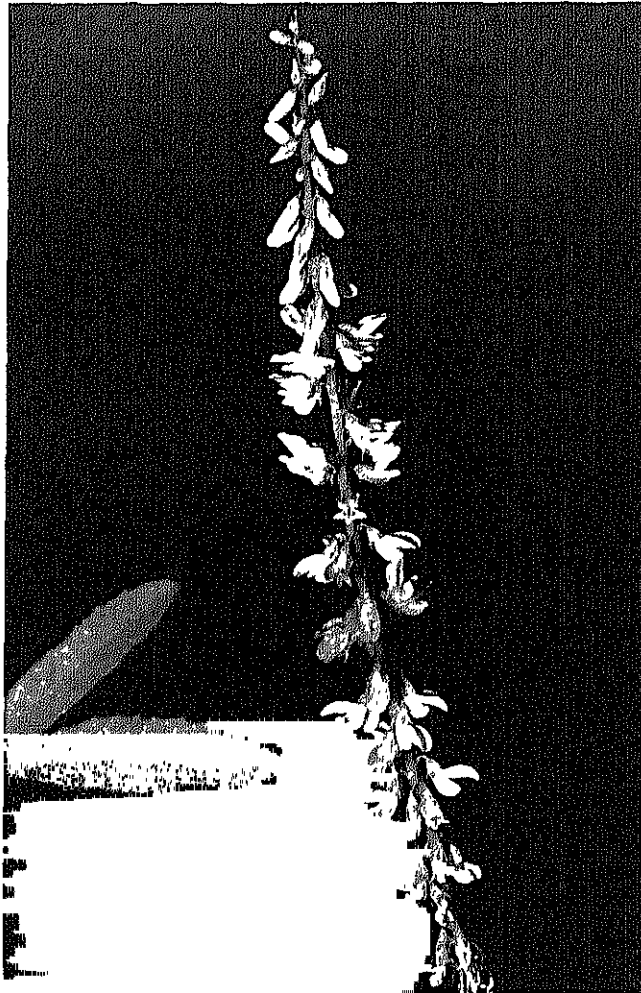
May-October

Field Marks: This species is distinguished by its racemes of small, white, sweetpea-shaped flowers, its 3 leaflets, and its 1-seeded, veiny pod.





Local Notes:



Habitat: Old fields, roadsides, other disturbed areas

Habit: Annual or biennial herb with taproots.

Stems: Upright, branched, up to 6 feet tall, smooth or slightly hairy.

Leaves: Alternate, divided into 3 leaflets; leaflets lanceolate to oblanceolate to oblong, rounded or pointed at the tip, tapering to the base, smooth on the upper surface, usually with some hairs on the lower surface, toothed, up to 1 1/2 inches long.

Flowers: Several crowded into elongated, spike-like racemes; racemes up to 6 inches long.

Sepals: 5, green, united below.

Petals: 5, white, unequal in size, up to 1/4 inch long.

Stamens: 10.

Pistils: Ovary superior

Fruits: Pod ovoid, smooth, 1-seeded, veiny, up to 1/4 inch long.

Notes: This widely distributed plant is native of Europe and Asia. This is an excellent forage species for livestock.

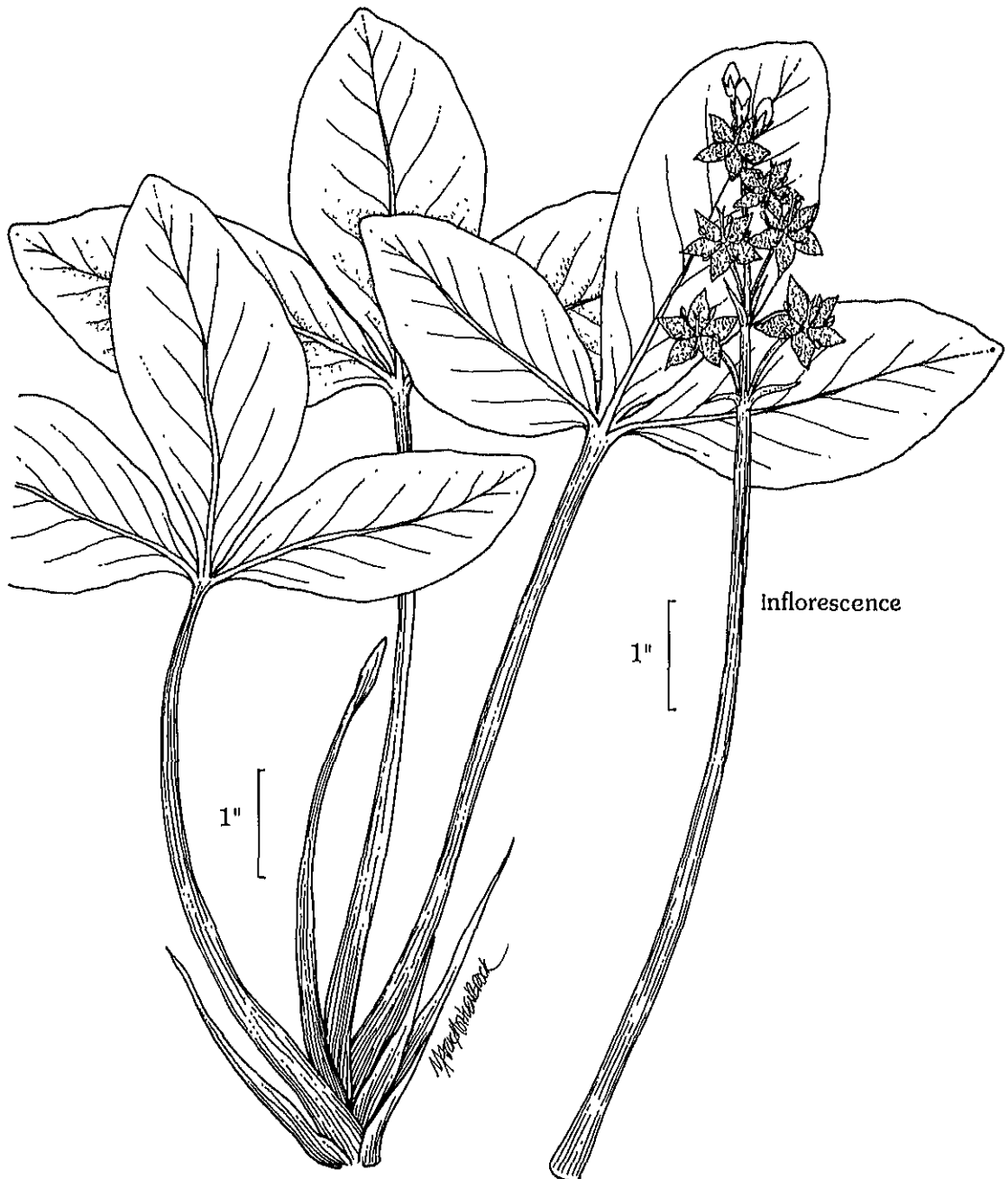
Buckbean

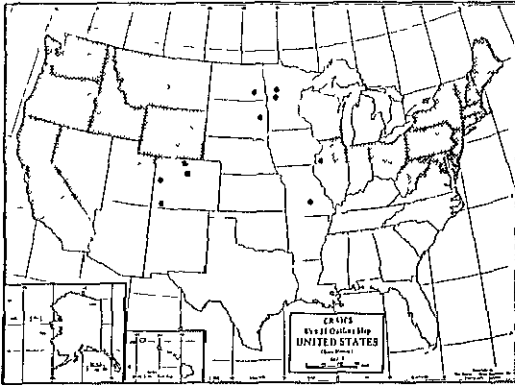
Menyanthes trifoliata L.

Family: Gentian (Gentianaceae)

May-August

Field Marks: This bog- and marsh-inhabiting species is recognized by its smooth trifoliate leaves that are all basal and its 4-6 white or pinkish united petals that are up to 1/2 inch long and fringed on the upper surface.





Local Notes:

Habitat: Marshes, bogs, swamps, edges of lakes.

Habit: Perennial herb with creeping rootstocks.

Stems: All underground or under water as rhizomes.

Leaves: Basal, divided into 3 leaflets; leaflets oblong to ovate, pointed or nearly rounded at the tip, tapering to the sessile base, up to 3 inches long, up to 2 inches wide, with or without teeth; leaf stalks up to 10 inches long, smooth.

Flowers: 7-20 borne on a separate leafless stalk; each flower stalk up to 1 inch long, with a bract at its base.

Sepals: Usually 5, united at the base, green, oblong to ovate, up to 1/6 inch long.

Petals: 4-6, usually 5, united to form a short funnel, white to pinkish, the tube and lobes up to 1/2 inch long.

Stamens: Usually 5, borne on the tube of the petals.

Pistils: Ovary superior or partly inferior; stigma 2-lobed.

Fruits: Capsules ovoid or spherical, up to 1/2 inch in diameter; seeds yellow-brown, shiny.

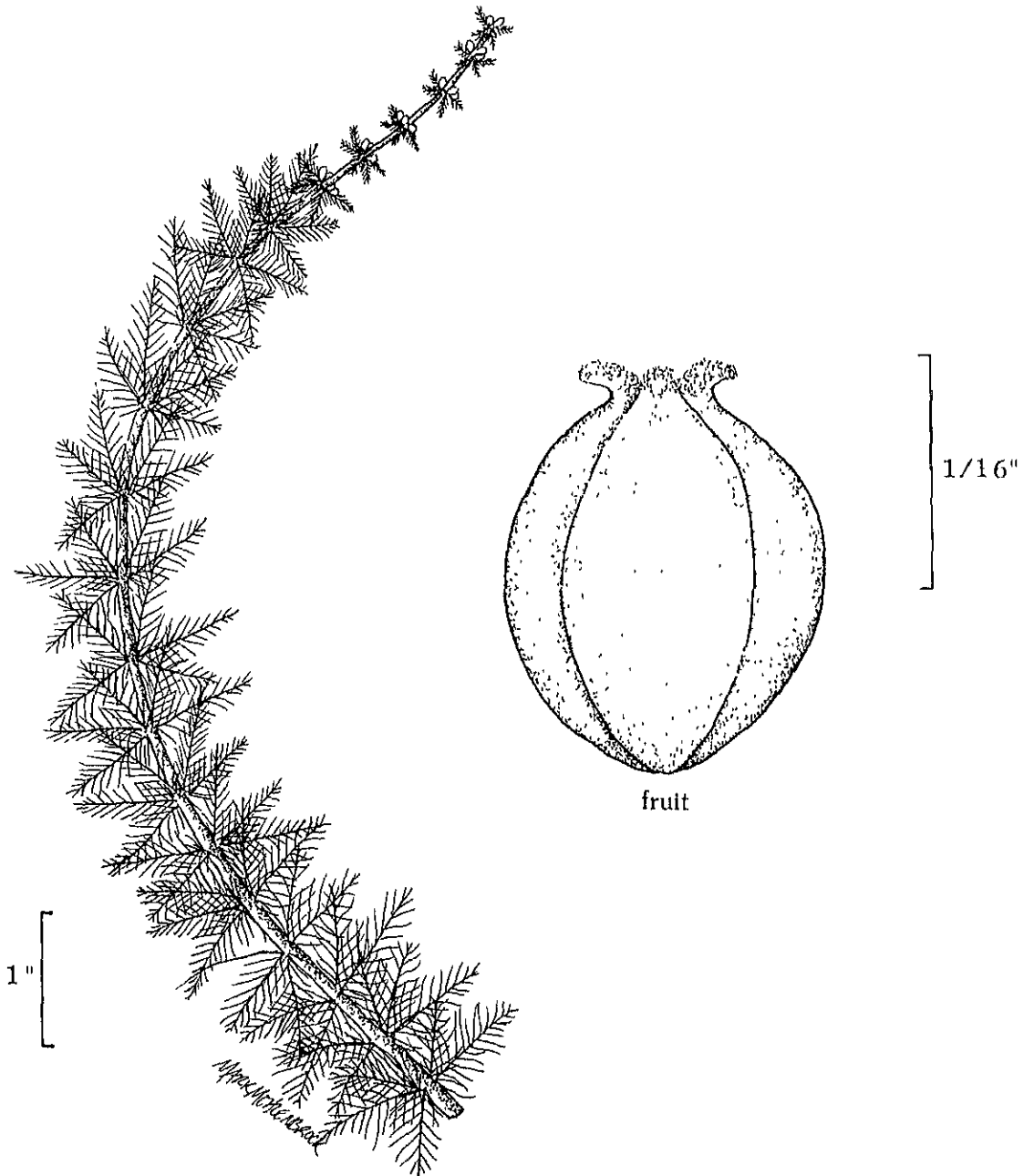
Whorled Water-milfoil

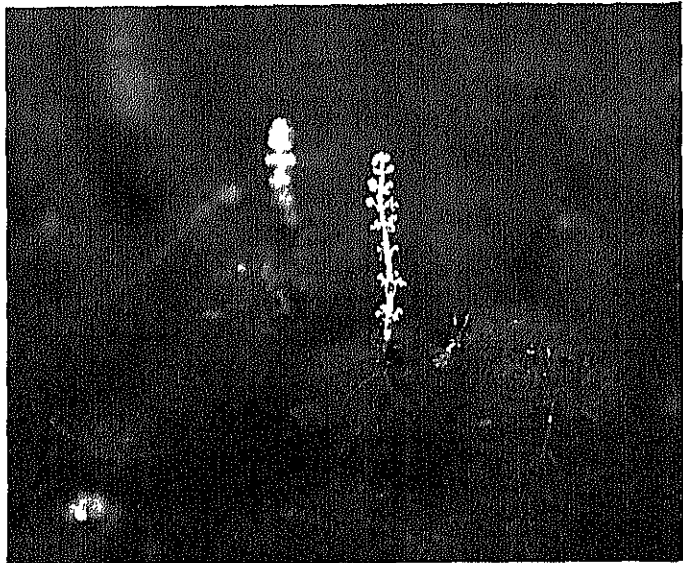
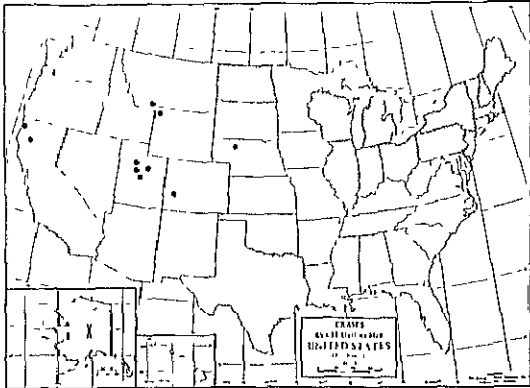
Myriophyllum verticillatum L.

Family: Water-milfoil

June-September

Field Marks: This milfoil differs from others by having its leaves, flowers, and bracts all arranged in whorls, with the bracts about as long as the flowers and deeply divided but not spiny





Local Notes:

Habitat: Ponds, lakes, marshes, usually in water.

Habit: Perennial aquatic herb with rhizomes, usually forming asexual "bulbs" (turions.)

Stems: Rather stout, mat-forming, branched or unbranched.

Leaves: All in whorls of 4 or 5, up to 2 inches long, pinnately divided into 8-13 thread-like segments, smooth.

Flowers: 3-6 in clusters in the axils of the leaves, the male and female flowers usually borne separately but on the same plant, each cluster of flowers subtended by pinnately lobed bracts about as long as the flowers.

Sepals: 4, green, united below, up to 1/16 inch long.

Petals: 4, in the male flowers, united below, greenish, up to 1/16 inch long, absent in the female flowers.

Stamens: 8.

Pistils: Ovary inferior; stigmas 4.

Fruits: Spherical, up to 1/8 inch in diameter, smooth.

Notes: The fruits are eaten by waterfowl.

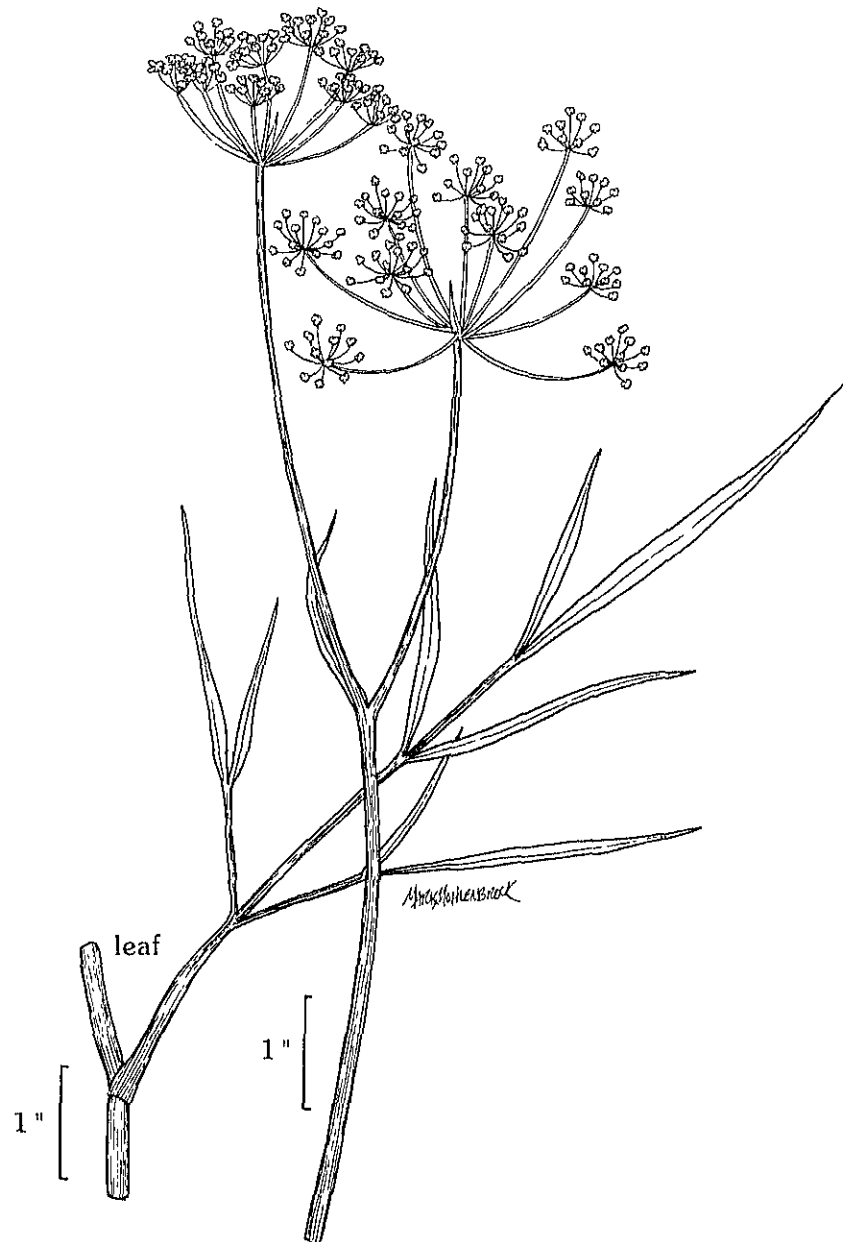
Parrish's Yampah

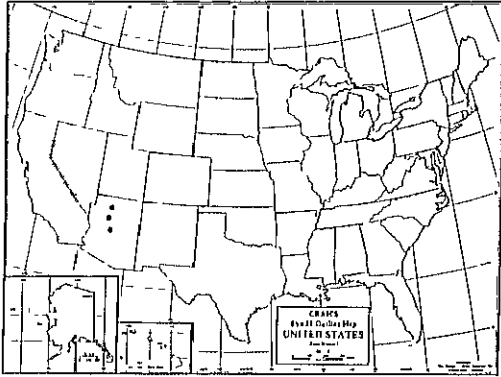
Perideridia parishii (Coult. & Rose) A. Nels. & J.F. Macbr.

Family: Parsley (Umbelliferae)

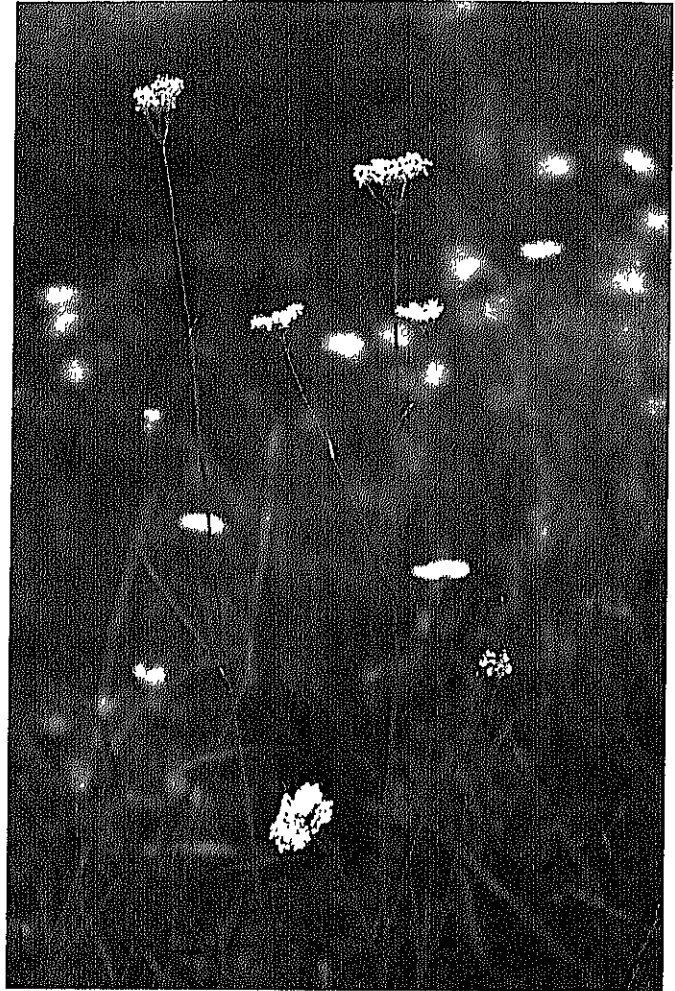
July-September

Field Marks: The genus *Perideridia* consists of species that have white flowers, are smooth, and have divided leaves with toothless segments. This species is further distinguished by its elongated fruits that taper to each end.





Local Notes:



Habitat: Wet meadows.

Habit: Perennial herb with 1 or more tubers.

Stems: Upright, slender, branched, up to 2 1/2 feet tall, smooth.

Leaves: Alternate, sometimes simple but usually divided into very narrow, toothless segments up to 4 inches long, smooth.

Flowers: Borne in umbels, with usually 8-15 umbels in an inflorescence; bractlets linear to obovate

Sepals: 5, green, very tiny.

Petals: 5, white, free from each other, up to 1/8 inch long.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Oblongoid to ovoid, up to 1/6 inch long, longer than broad, tapering to each end.

Western Jacob's-ladder

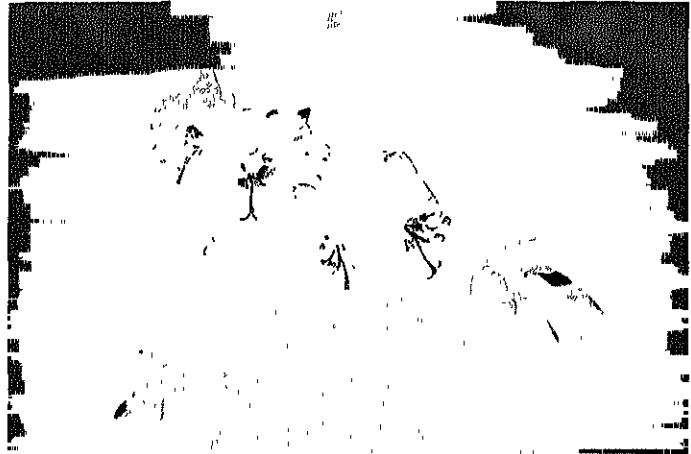
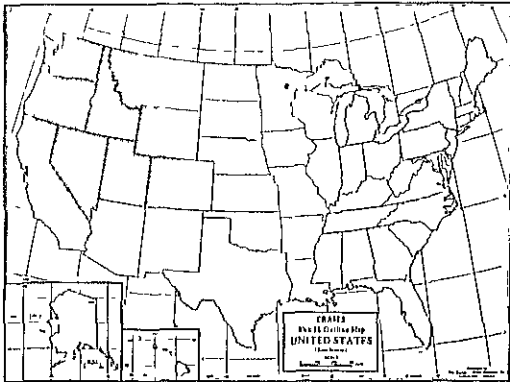
Polemonium occidentale Greene

Family: Phlox (Polemoniaceae)

June-August

Field Marks: This Jacob's-ladder differs from others by its 11-27 lanceolate toothless leaflets, its solitary stems, and the petals about twice as long as the tube of the petals.





Local Notes:

Habitat: Along streams, swamps, wet places in the mountains.

Habit: Perennial herb from rhizomes.

Stems: Solitary, upright, smooth or glandular-hairy, up to 3 feet tall.

Leaves: Alternate, pinnately compound with 11-27 leaflets; each leaflet lanceolate, pointed at the tip, tapering to the base, up to 1 3/4 inches long, up to 1/2 inch wide, without teeth, smooth or glandular-hairy.

Flowers: Several crowded into a branched but narrow inflorescence, subtended by lobed or toothless bracts.

Sepals: 5, green, united to form a cup, glandular-hairy, up to 1/2 inch long, the lobes about as long as the teeth.

Petals: 5, blue, united about 1/2-way to form a tube, 1/2-3/4 inch long, the lobes longer than the tube.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior; styles exerted beyond the petals.

Fruits: Capsules ovoid, about 1/8 inch long, with several elongated seeds.

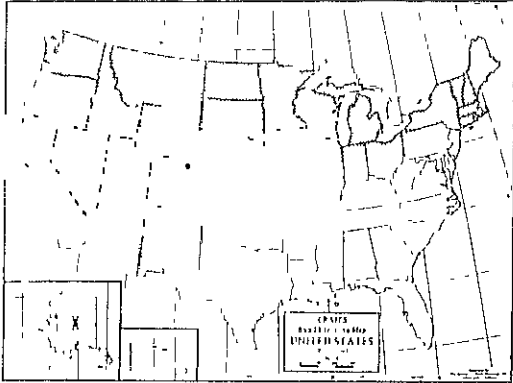
Potentilla anserina L.

May-October

A detailed botanical line drawing of a plant. The main illustration shows a root system with several fibrous roots extending downwards. From the base, multiple stems arise, bearing large, deeply feathery compound leaves. The leaflets are numerous, narrow, and serrated. A single flower is shown at the top right of the main plant. A vertical scale bar labeled '1"' is positioned to the left of the root system. The name 'Mikania lanata' is written in cursive script near the base of the plant. In the bottom left corner, there is a separate, larger drawing of a single flower, showing five petals and a central cluster of stamens.

A black and white line drawing of a flower with five petals. The center of the flower is filled with numerous fine, radiating lines, suggesting stamens or a detailed floral structure. The petals are simple, rounded shapes surrounding the central core.

flower



Local Notes:

Habitat: Along streams, moist soils, particularly in alkaline areas.

Habit: Perennial herb with stolons.

Stems: Only flower-bearing upright stems present, up to 6 inches long, hairy.

Leaves: Nearly all basal, pinnately compound, with 7-31 leaflets; each leaflet obovate to oblong, interspersed with smaller leaflets, up to 1 1/2 inches long, pointed or rounded at the tip, tapering or rounded at the base, silvery-silky, particularly on the lower surface, toothed.

Flowers: Solitary at the tip of often leafless stalks, bractlets usually a little longer than the sepals

Sepals: 5, green, united to form a cup, the lobes 1/6-1/4 inch long, pointed, hairy, spreading or turned downward at flowering time.

Petals: 5, yellow, free from each other, 1/4-1/2 inch long, rounded at the tip.

Stamens: 20-25.

Pistils: Several, free from each other, ovary superior

Fruits: Achenes ovoid, up to 1/8 inch long, corky, grooved, yellow-brown.

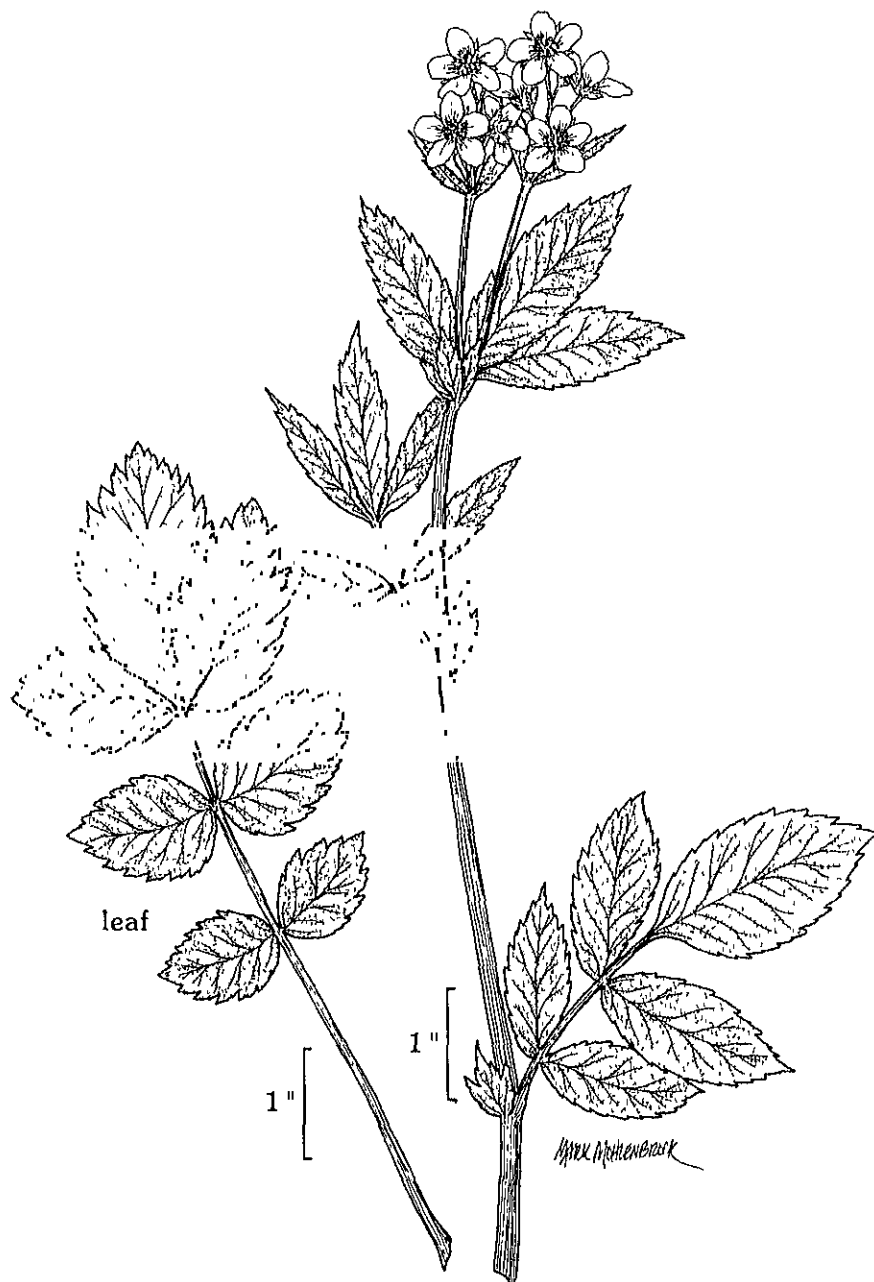
Tall Cinquefoil

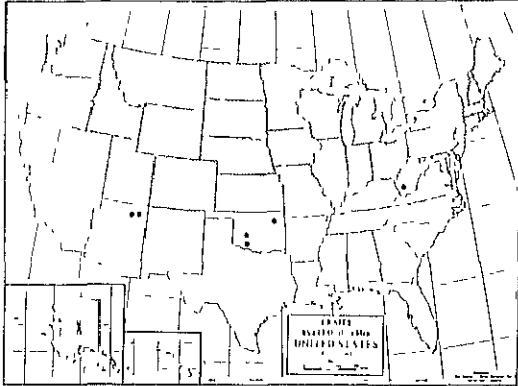
Potentilla arguta Pursh

Family: Rose (Rosaceae)

June-August

Field Marks: This perennial cinquefoil is distinguished by its narrow clusters of white or creamy-white flowers, its unbranched stems up to 3 feet tall, and its pinnately divided basal leaves





Local Notes:

Habitat: Woods, prairies, roadsides.

Habit: Perennial herb with a thickened, often branched rootstock.

Stems: Upright, unbranched, up to 3 feet tall, sticky-hairy.

Leaves: Pinnately compound, with 5-11 leaflets, the basal leaves larger than those on the stem and on longer leaf stalks; leaflets ovate to oblong to elliptic, the largest up to 3 inches long, coarsely toothed to shallowly lobed, hairy and often glandular-hairy; stipules at base of stem leaves up to 1 1/2 inches long.

Flowers: Several crowded into narrow cymes, the branches upright, each flower subtended by bractlets smaller than the sepals.

Sepals: 5, green, united below, 1/4-1/2 inch long, oblong to lanceolate, pointed at the tip.

Petals: 5, white or creamy-white, free from each other, obovate to oblong, a little shorter or a little longer than the sepals.

Stamens: 20-30.

Pistils: Numerous, with a superior ovary.

Fruits: Achenes slightly beaked, about 1/20 inch long, brown, slightly wrinkled.

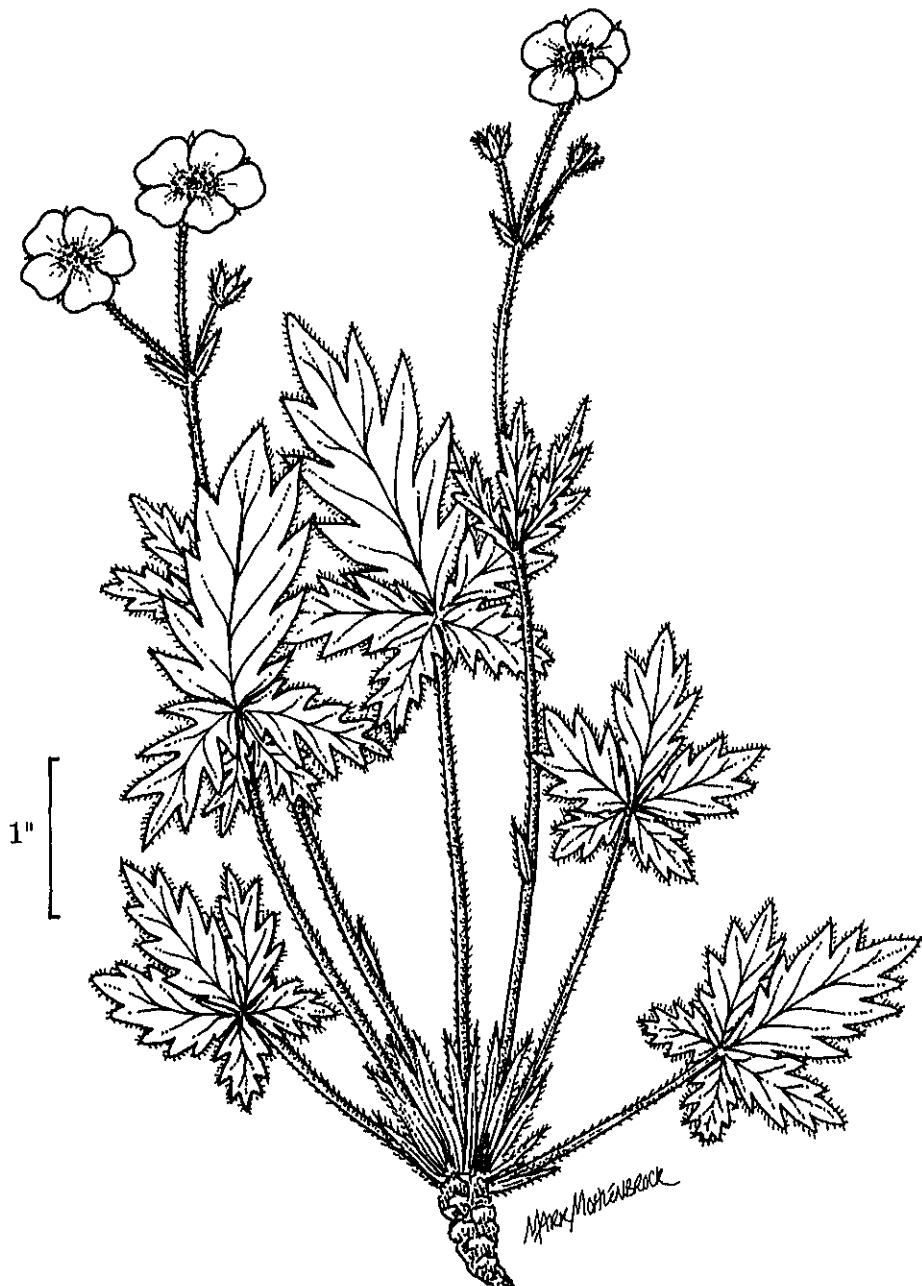
Varileaf Cinquefoil
Potentilla diversifolia Lehm.

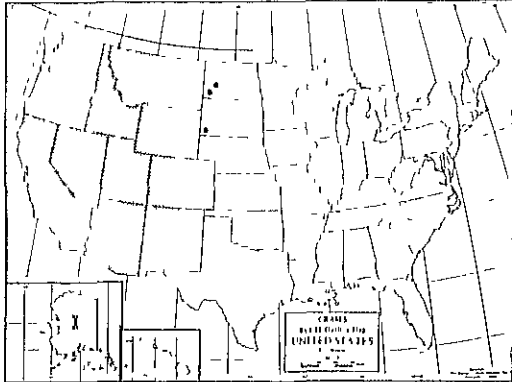
Potentilla diversifolia Lehm.

Family: Rose (Rosaceae)

July-August

Field Marks: This cinquefoil has basal leaves palmately divided into 5 or 7 sharply toothed leaflets and yellow flowers 1 inch across with about 20 stamens.





Local Notes:

Habitat: Along streams, in rocky woods, wet meadows.

Habit: Perennial herb with a thickened rootstock

Stems: Upright, rather slender, up to 3 feet tall, smooth or with appressed hairs.

Leaves: Mostly palmately divided into 5 or 7 leaflets, rarely pinnately divided, the leaflets obovate to oblanceolate, up to 2 inches long, pointed or rounded at the tip, tapering to the base, sharply toothed, usually somewhat hairy.

Flowers: Several in cymes; flowers subtended by small, lanceolate bracts up to 1/4 inch long.

Sepals: 5, green, united below to form a tube (hypanthium), the lobes ovate to lanceolate, up to 1/4 inch long.

Petals: 5, yellow, free from each other, up to 1/2 inch long.

Stamens: About 20.

Pistils: Many, each with a superior ovary.

Fruits: Achenes several in a cluster, smooth, up to 1/16 inch long, pale brown.

Notes: This species is rather variable in the shape and number of leaflets.

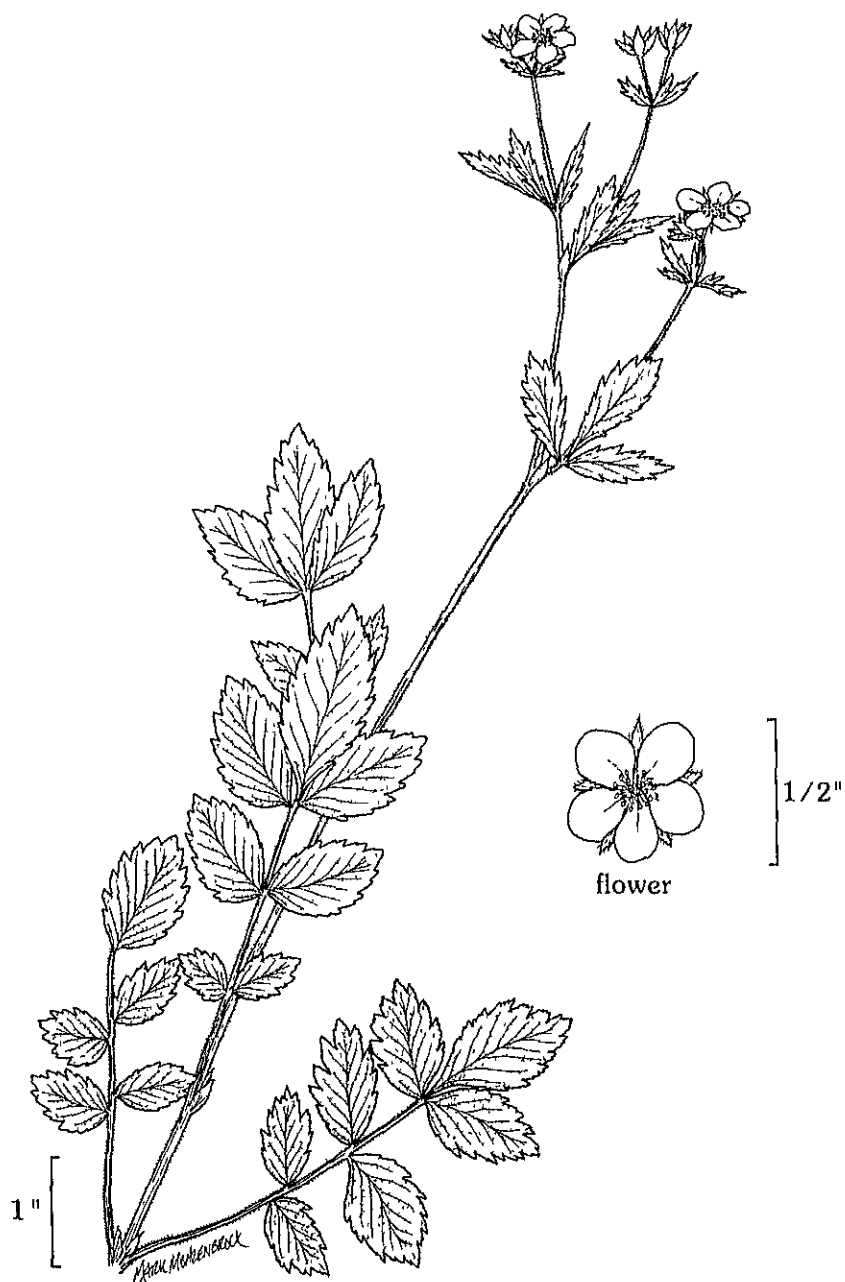
Gland Cinquefoil

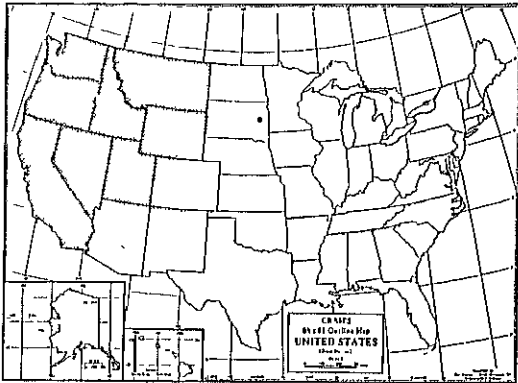
Potentilla glandulosa Lindl.

Family: Rose (Rosaceae)

June-August

Field Marks: The field marks of this cinquefoil are its glandular-hairy stems and leaves, its pinnately compound leaves with 5-9 leaflets, and its yellowish petals not more than twice as long as the sepals





Local Notes:



Habitat: Open woods.

Habit: Perennial herb with a thickened rootstock and short rhizomes.

Stems: Upright, usually unbranched, up to 1 1/2 feet tall, glandular-hairy.

Leaves: Alternate and basal, pinnately compound with 5-9 leaflets; leaflets obovate, up to 1 1/2 inches long, glandular-hairy, sharply toothed; stipules ovate-lanceolate, up to 1/3 inch long.

Flowers: Few in a cyme; bractlets subtending each flower often nearly as long as the sepals, hairy.

Sepals: 5, green, lanceolate to ovate, up to 1/2 inch long, hairy.

Petals: 5, yellowish, free from each other, ovate, 1/4-3/4 inch long, shorter or longer than the sepals.

Stamens: About 25.

Pistils: Numerous, each with a superior ovary.

Fruits: Achenes yellow-brown, smooth, up to 1/16 inch long.

Notes: Sometimes the hairs on the plant are not glandular.

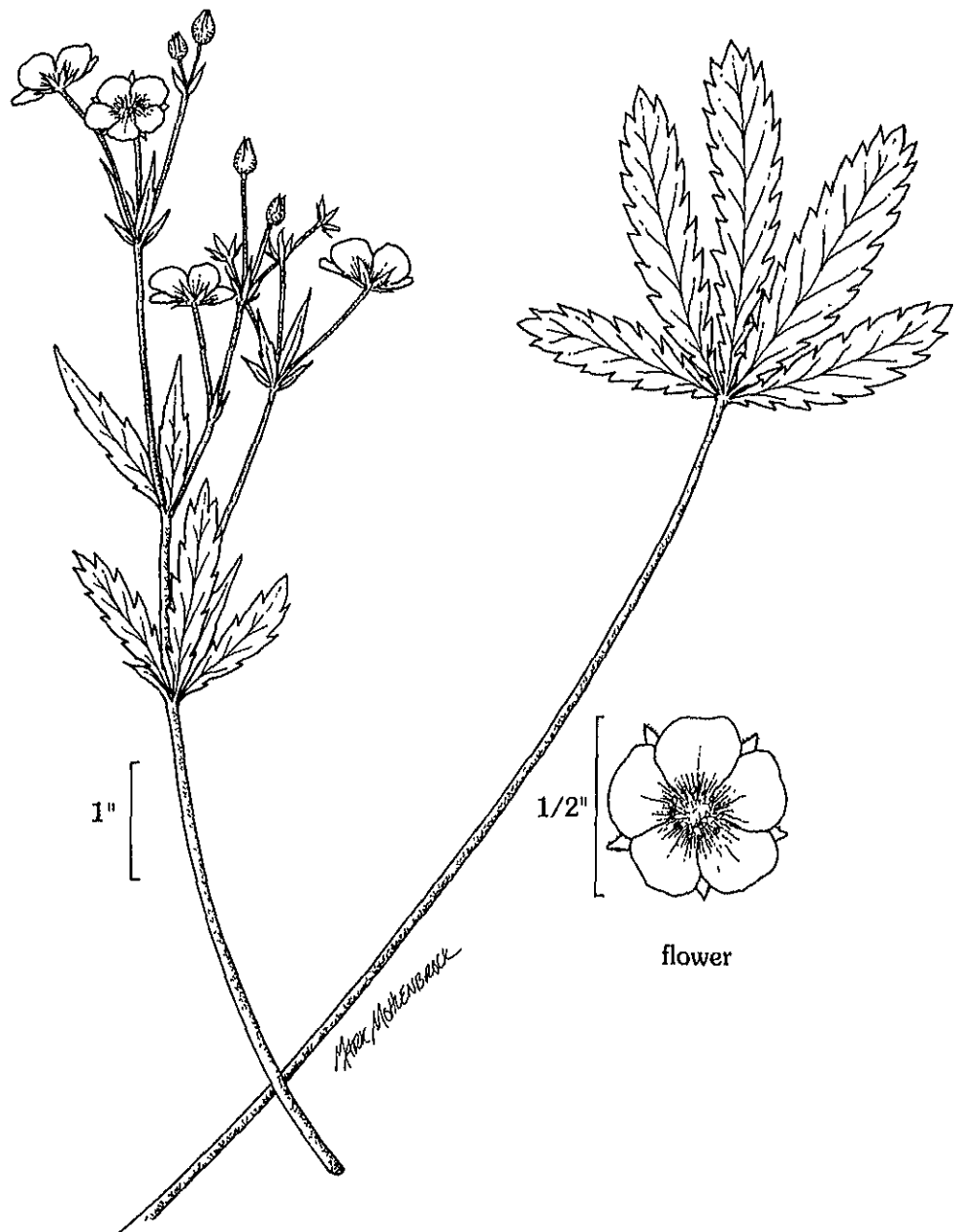
Northwest Cinquefoil

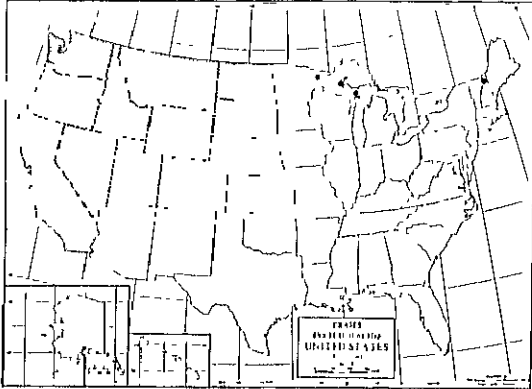
Potentilla gracilis Dougl. ex Hook.

Family: Rose (Rosaceae)

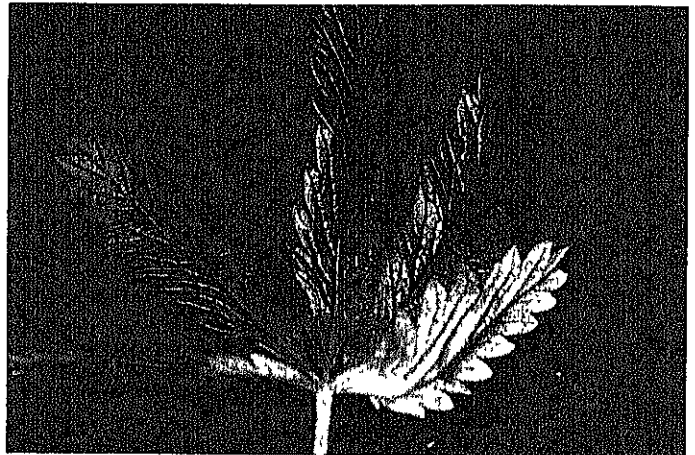
May-August

Field Marks: This cinquefoil differs from all others by its palmately divided basal leaves and its 5-9 leaflets that are toothed or divided only to about the middle of each segment





Local Notes:



Habitat: Wet meadows, damp forests, common in the mountains.

Habit: Perennial herb from a short, stout rootstock.

Stems: Upright, up to 2 feet tall, usually with some sort of hairiness

Leaves: Palmately divided into 5-9 leaflets, each leaflet oblanceolate, up to 3 1/2 inches long, green or gray, variously hairy or sometimes nearly smooth on the lower surface, toothed or divided only to about the middle; stipules toothed or toothless, up to 1 inch long

Flowers: Many in an open cyme, each flower subtended by a bract.

Sepals: 5, green, alternating with 5 small bractlets on the outside, lanceolate to ovate, 1/4-1/2 inch long, usually silky-hairy.

Petals: 5, yellow, free from each other, obovate, usually with a rather shallow notch at the tip, 1/4-3/4 inch long.

Stamens: Usually 20.

Pistils: Several to many, located in a cup (hypanthium); ovary superior.

Fruits: Achenes smooth, greenish yellow, about 1/16 inch long.

Notes: Throughout its range, this is an extremely variable species, particularly in the coloration, hairiness, and division of the leaves.

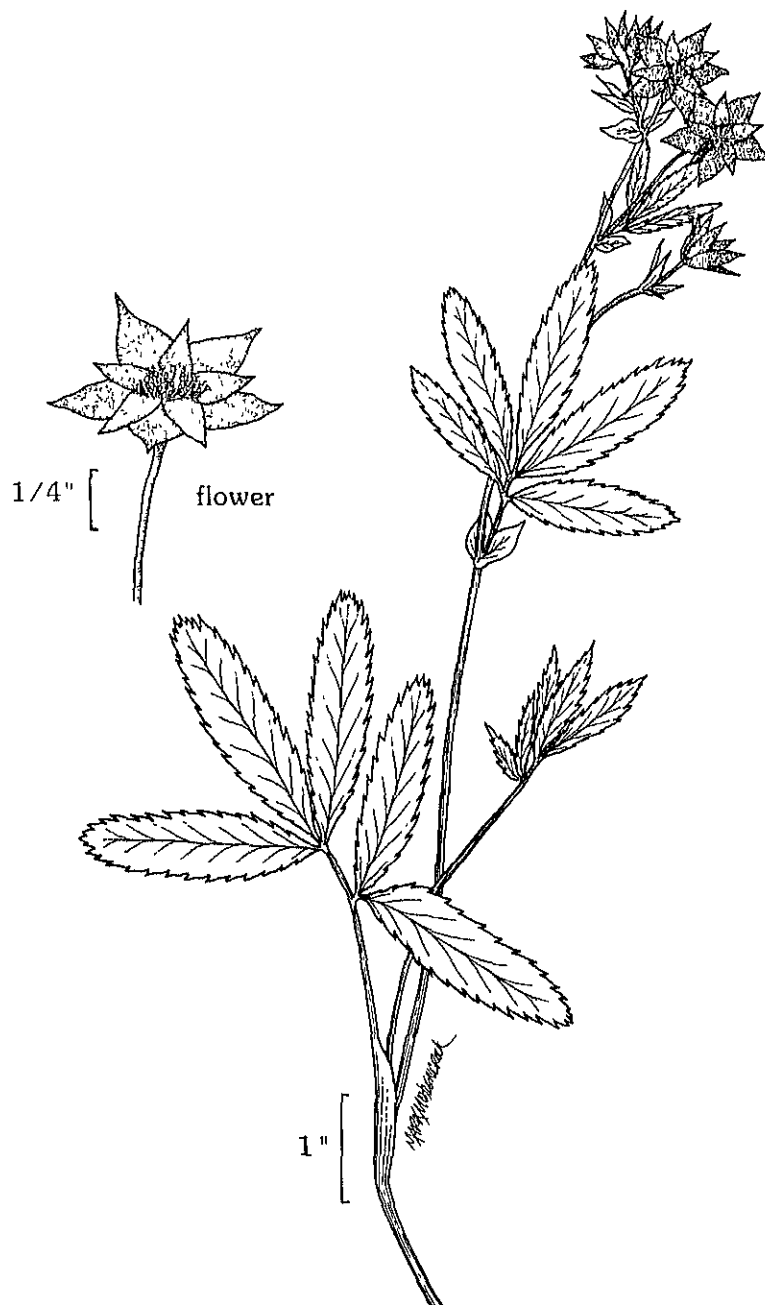
Marsh Cinquefoil

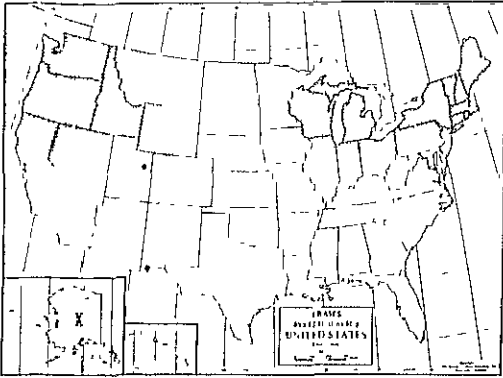
Potentilla palustris (L.) Scop.

Family: Rose (Rosaceae)

May-August

Field Marks: The characteristics of this cinquefoil are its reddish purple flowers with pointed petals and its palmately compound leaves with 5-7 leaflets.





Local Notes:



Habitat: Swamps, bogs.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright or ascending, stout, up to 1 1/2 feet tall, glandular-hairy in the upper half, more or less smooth in the lower half.

Leaves: Alternate, palmately compound, with 5-7 leaflets; leaflets lanceolate to oblong to oblanceolate, up to 2 1/2 inches long, rounded at the tip, tapering to the base, toothed, smooth on the upper surface, pale and smooth or hairy on the lower surface.

Flowers: Few borne in cymes; flowers subtended by bracts up to 1/3 inch long.

Sepals: 5, united below to form a short floral tube, ovate, up to 3/4 inch long, pointed at the tip, purplish.

~ each other, ovate-lanceolate, pointed at the tip, up to 1/3 inch long,

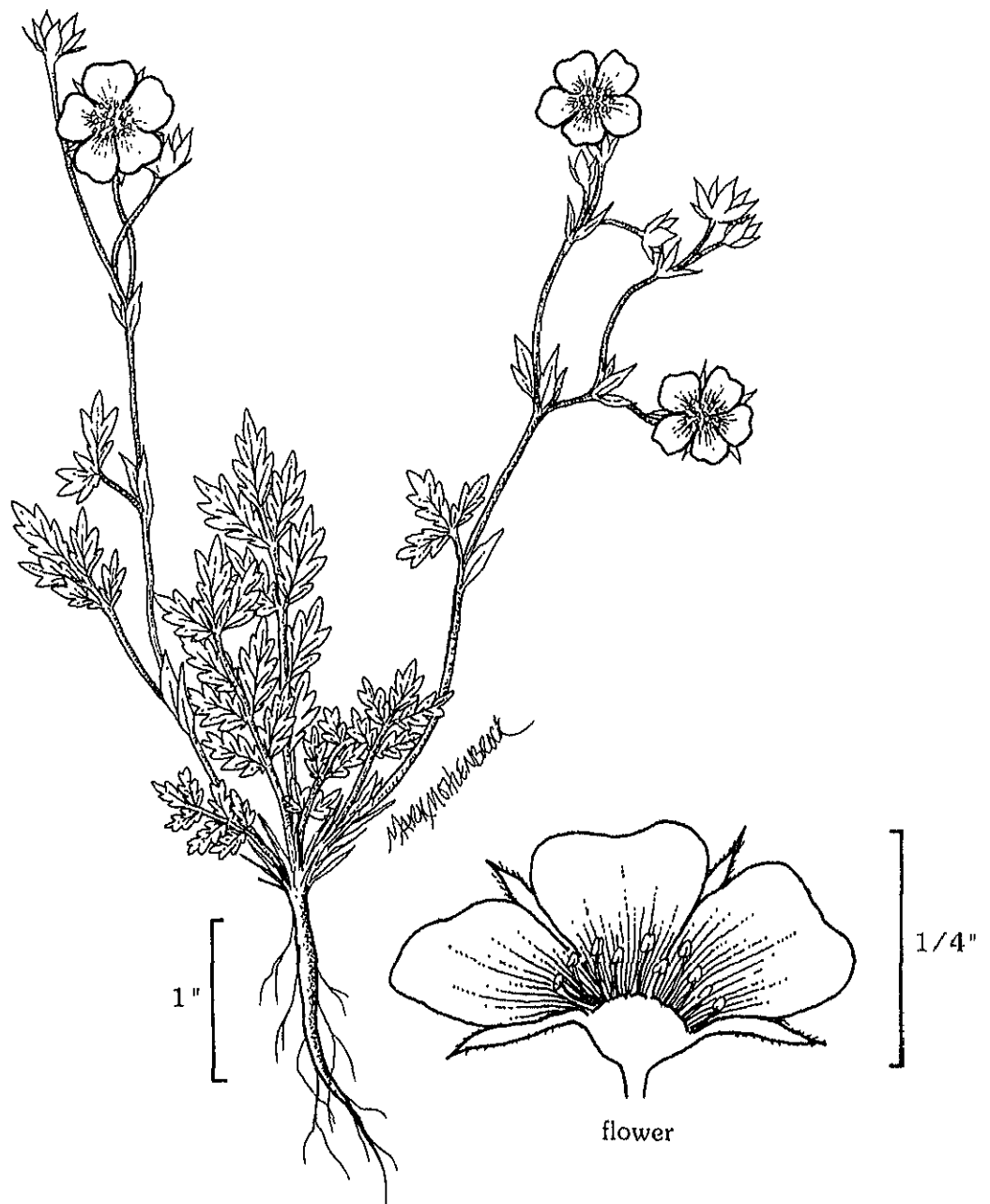
Platte Cinquefoil
Potentilla plattensis Nutt.

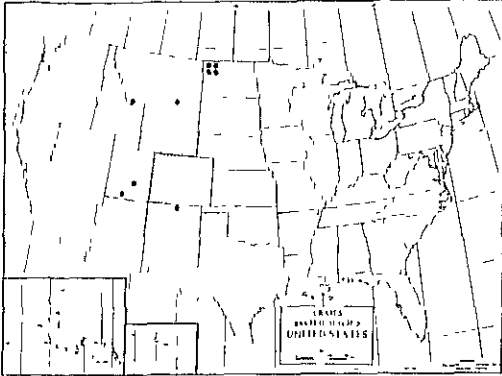
Potentilla plattensis Nutt.

Family: Rose (Rosaceae)

June-August

Field Marks: This species has pinnately compound basal leaves with 7-17 leaflets. The flowers are yellow with petals 1/6-1/4 inch long.





Local Notes:

Habitat: Wet meadows, moist or dry prairies.

Habit: Perennial herb with a thickened rootstock.

Stems: Upright or lying flat, usually branched, up to 10 inches long, smooth or with appressed hairs, sometimes reddish.

Leaves: Basal and alternate, pinnately divided into 7-17 leaflets; leaflets obovate to oblong, up to 1/2 inch long, deeply lobed, smooth or with appressed hairs; stipules leafy, lanceolate, 1/4-1/2 inch long; basal leaves with stalks, stem leaves sessile.

Flowers: Few to several in an open cyme, each flower on a slender stalk, subtended by an oblong bract up to 1/10 inch long.

Sepals: 5, green, united below to form a short floral tube, the lobes triangular to lanceolate, up to 1/6 inch long, with appressed hairs.

Petals: 5, yellow, free from each other, up to 1/4 inch long.

Stamens: 20.

Pistils: Several, each with a superior ovary.

Fruits: Achenes many, greenish to dark brown, smooth.

Notes: The achenes are eaten by birds.

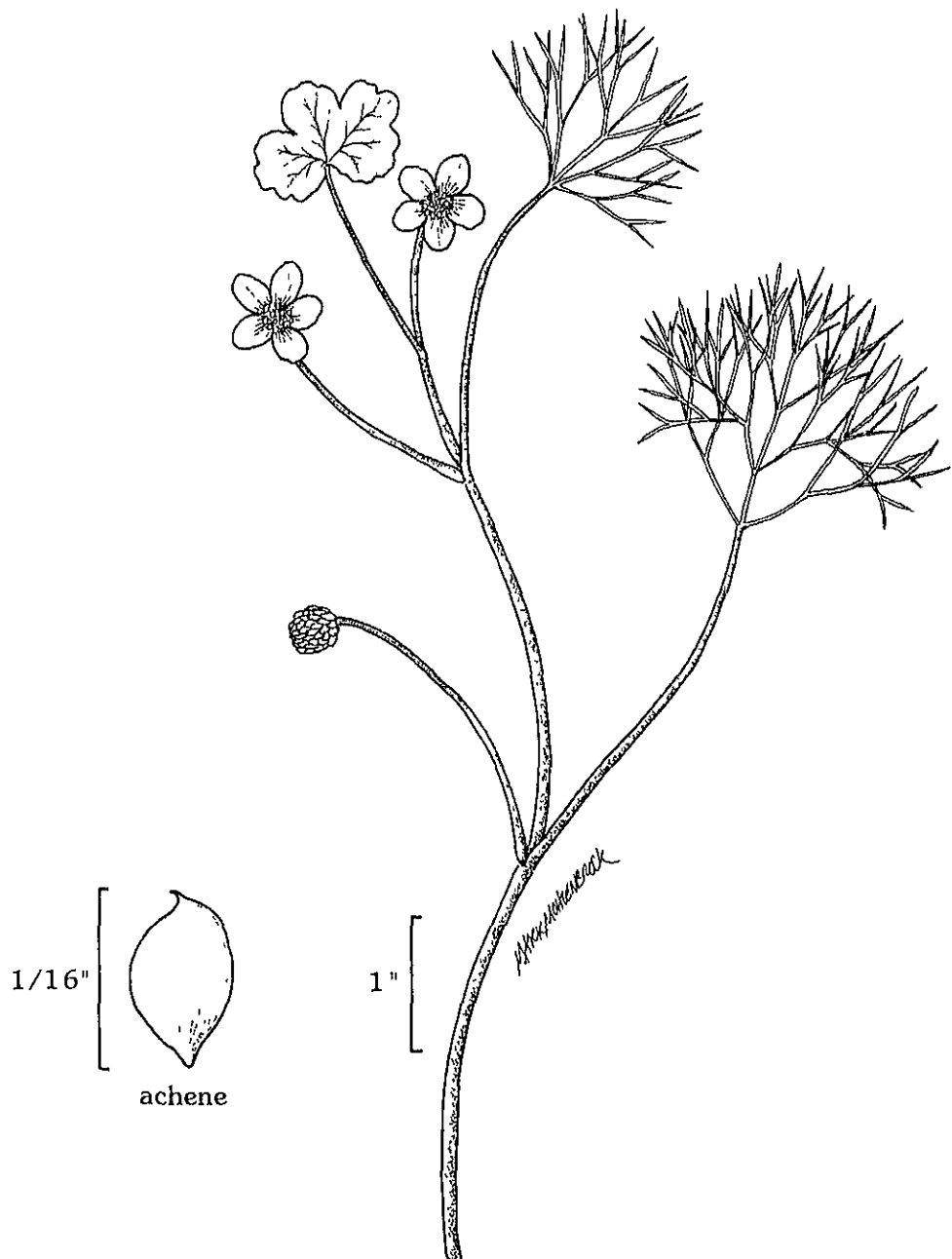
White Water Butter-cup

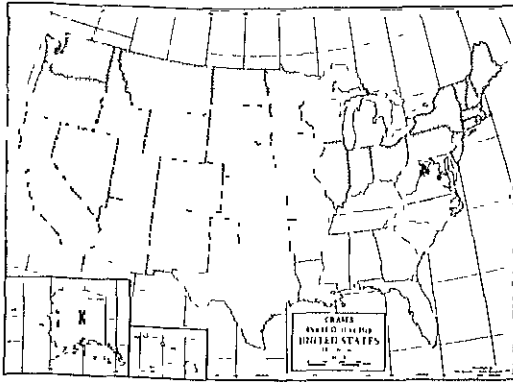
Ranunculus aquatilis L.

Family: Butter-cup (Ranunculaceae)

April-July

Field Marks: This is an aquatic white-flowered butter-cup with much divided submersed leaves. It differs from the similar *R. subrigidus* by having its flower stalks straight and not curved by fruiting time. This species may have a few 3-lobed floating leaves.





Local Notes:



Habitat: In ponds and ditches, in streams, vernal pools.

Habit: Perennial herb with submersed stems.

Stems: Submersed, smooth or hairy, up to 3 feet long.

Leaves: Submersed leaves up to 2 inches long, much divided into thread-like segments, smooth or hairy; floating leaves few, simple but often 3-lobed, less than 1 inch wide, smooth or hairy.

Flowers: Several in clusters, up to 1/2 inch across, each flower on a stalk up to 1 1/2 inches long.

Sepals: 5, green, free from each other, up to 1/8 inch long.

Petals: 5, white, free from each other, up to 1/4 inch long.

Stamens: 10-25.

Pistils: Many, each with a superior ovary, smooth.

Fruits: Achenes 15-25 in a cluster at the tip of a straight stalk, each achene up to 1/16 inch long, smooth, with a minute beak.

Notes: The stems will root at the nodes if the plant is stranded on land. The submersed leaves collapse when removed from the water. The achenes are eaten by waterfowl.

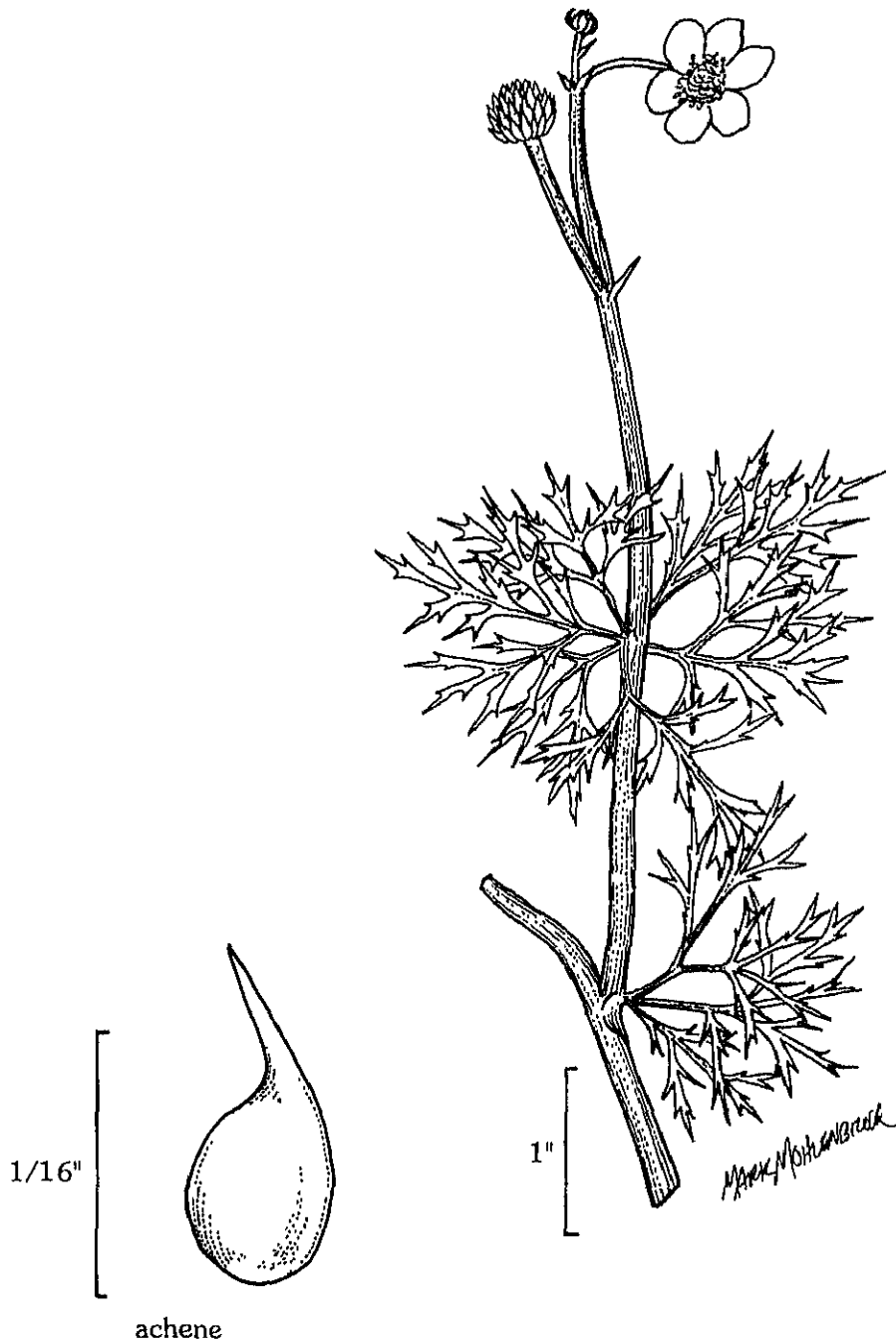
Yellow Water Butter-cup

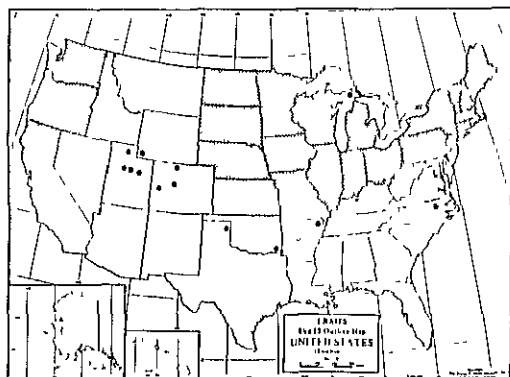
Ranunculus flabellaris Raf.

Family: Butter-cup (Ranunculaceae)

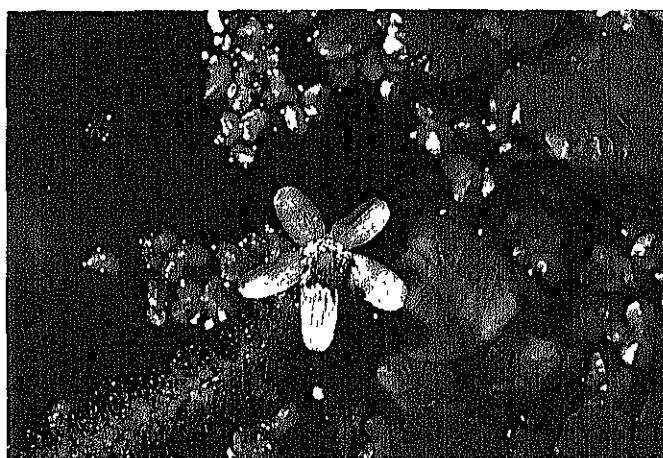
April-August

Field Marks: This species when growing in water has greatly dissected leaves with very narrow segments. The yellow flowers are 3/4-1 1/2 inches across and contain 50-80 stamens.





Local Notes:



Habitat: Shallow waters or in mud, in marshes, in wet ditches.

Habit: Aquatic or mud-inhabiting perennial with thread-like roots.

Stems: Floating in water or lying on mud and rooting at the nodes, branched, up to 2 feet long, smooth or hairy.

Leaves: Deeply dissected in aquatic forms, each segment extremely narrow, less divided and with broader segments when rooted in mud, usually smooth.

Flowers: 1-few in a cluster; each flower on a stalk up to 2 inches long.

Sepals: 5, free from each other, greenish yellow, 1/4-1/3 inch long.

Petals: Usually 5, sometimes more, yellow, free from each other, 1/3-3/4 inch long.

Stamens: 50-80.

Pistils: Many in each flower, each with a superior ovary.

Fruits: Many achenes, together in a head, the head nearly 1/2 inch in diameter, each achene obovoid, up to 1/8 inch long, with a flat beak.

Notes: The achenes are eaten by birds and small mammals.

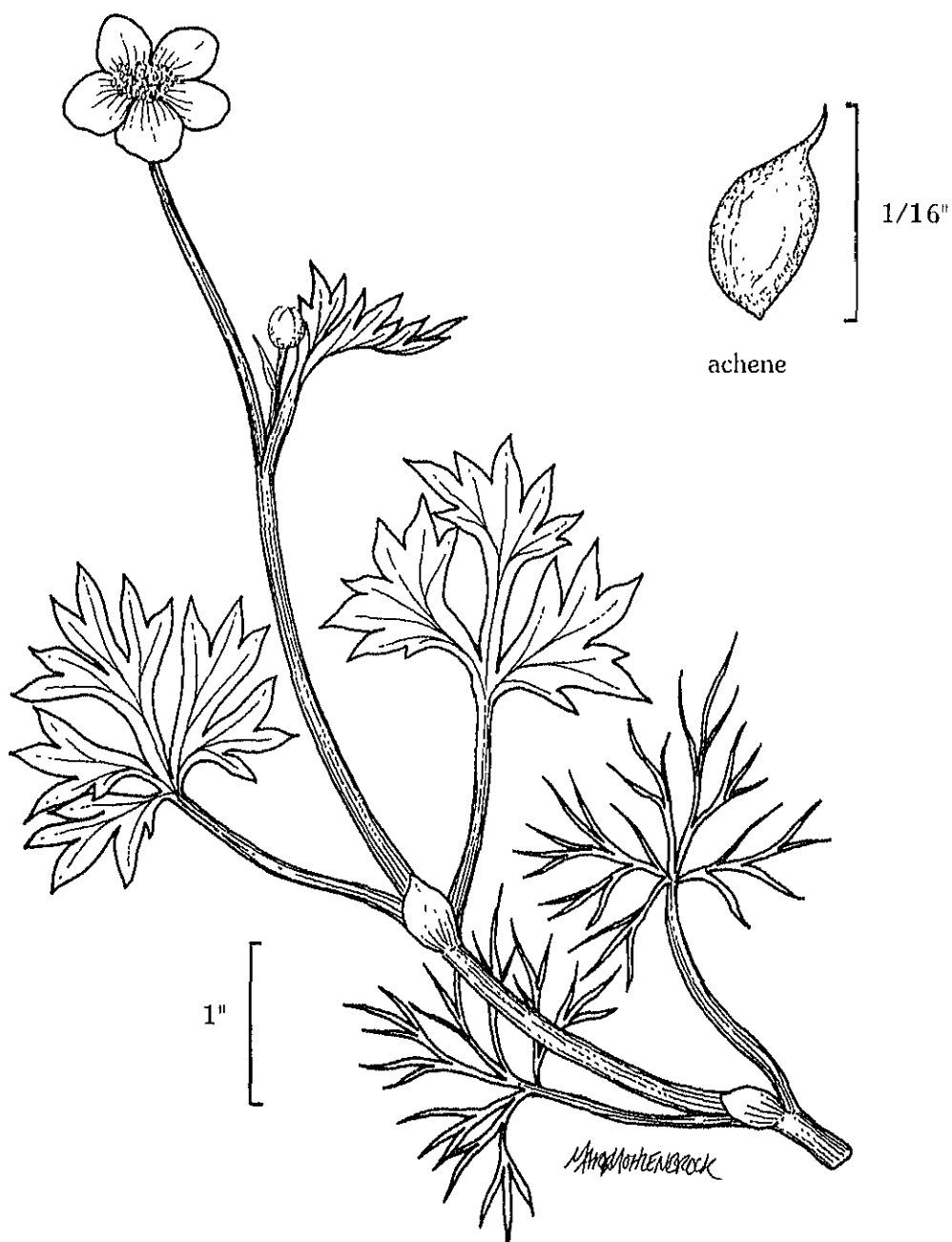
Small Yellow Water Butter-cup

Ranunculus gmelinii DC.

Family: Butter-cup (Ranunculaceae)

May-September

Field Marks: This yellow-flowered butter-cup usually grows in standing water. The segments of the divided, floating leaves may be as much as 1 inch wide, not thread-like.





Local Notes:



Habitat: Along streams, around ponds, in marshes, in ditches, often in standing water

Habit: Perennial herb with slender rhizomes.

Stems: Submersed stems floating on water, terrestrial stems rooting at the nodes, sparsely branched, up to 1 1/2 feet long, smooth or hairy.

Leaves: Alternate, those floating on the water surface 3-lobed or once- or twice-divided into leaflets, the leaflets linear to ovate, those submersed much more narrowly divided, up to 1 inch long, up to 1 inch wide, smooth or hairy.

Flowers: 1-several

Sepals: 5, greenish yellow, free from each other, spreading, ovate, up to 1/4 inch long, smooth or hairy.

Petals: 5, sometimes 6, 7, or 8, yellow, free from each other, obovate to nearly spherical, up to 1/3 inch long.

Stamens: 20-45

Pistils: Many, each with a superior ovary.

Fruits: Many achenes crowded into an ovoid or spherical head 1/3-1/2 inch across, each achene obovoid, up to 1/16 inch long, with a flat, narrowly triangular beak

Notes: The achenes are eaten by waterfowl

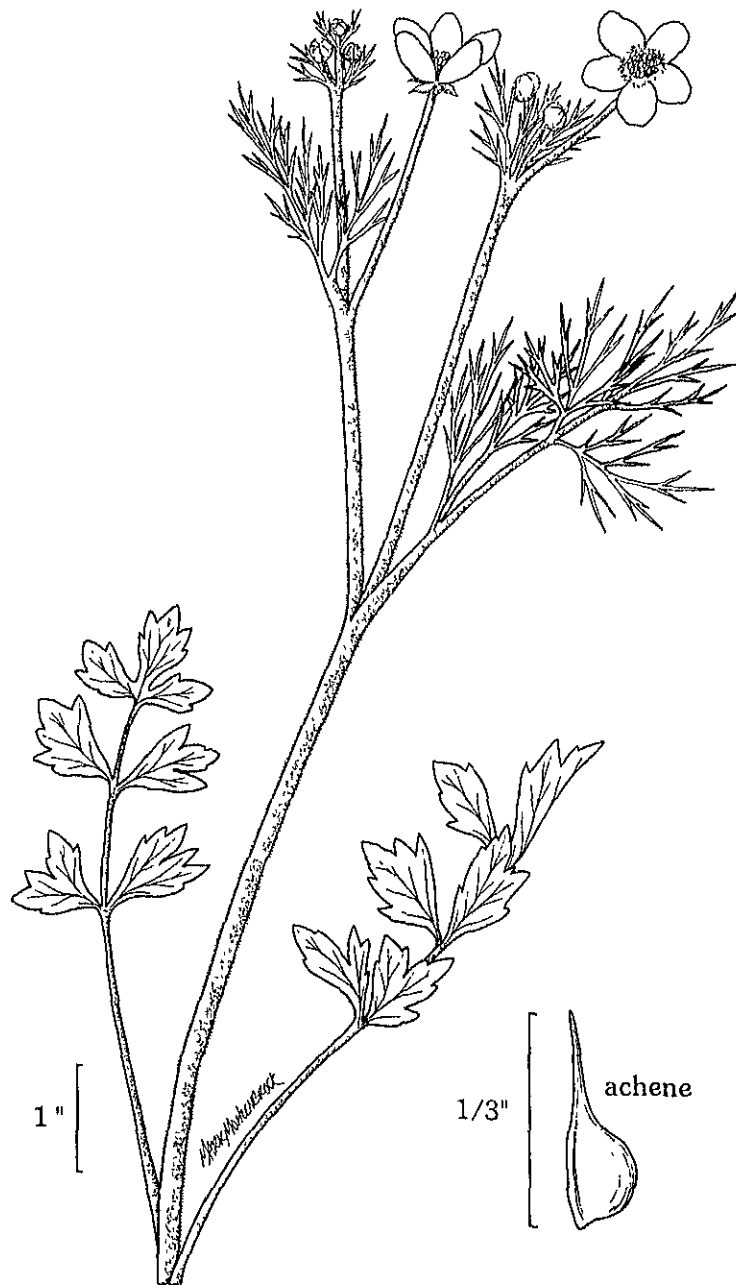
Straight-beak Butter-cup

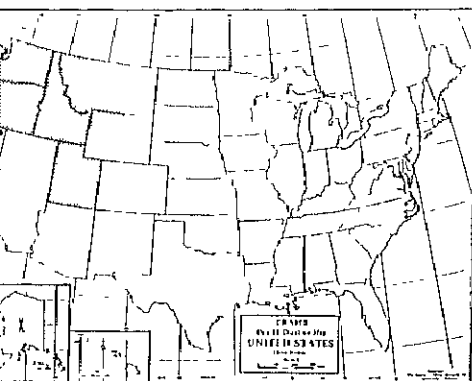
Ranunculus orthorhynchus Hook.

Family: Butter-cup (Ranunculaceae)

May-July

Field Marks: This butter-cup has achenes that are about 1/6 inch long with a straight beak about the same length. Most of the leaves are pinnately divided into 3-7 leaflets.





Local Notes:



Habitat: Wet meadows.

Habit: Perennial herb with rather fleshy roots.

Stems: Upright, usually branched, hollow, up to 1 1/2 feet tall, with spreading hairs.

Leaves: At least the basal leaves pinnately divided into 3-7 leaflets, with each leaflet divided again into narrow, pointed segments, hairy; stalks up to 6 inches long, smooth or hairy.

Flowers: Several in a branched cluster, up to 2 1/2 inches across.

Sepals: 5, yellow-green, free from each other, up to 1/3 inch long, hairy, turned downward.

Petals: 5, yellow, sometimes reddish on the back, free from each other, 1/3 inch to nearly 1 inch long.

Stamens: 20-40.

Pistils: Many in a cluster, each with a superior ovary, smooth.

Fruits: Achenes 12-20 in a cluster, ellipsoid, up to 1/6 inch long, with a straight beak as long as the achenes or longer.

Notes: The achenes are eaten by waterfowl.

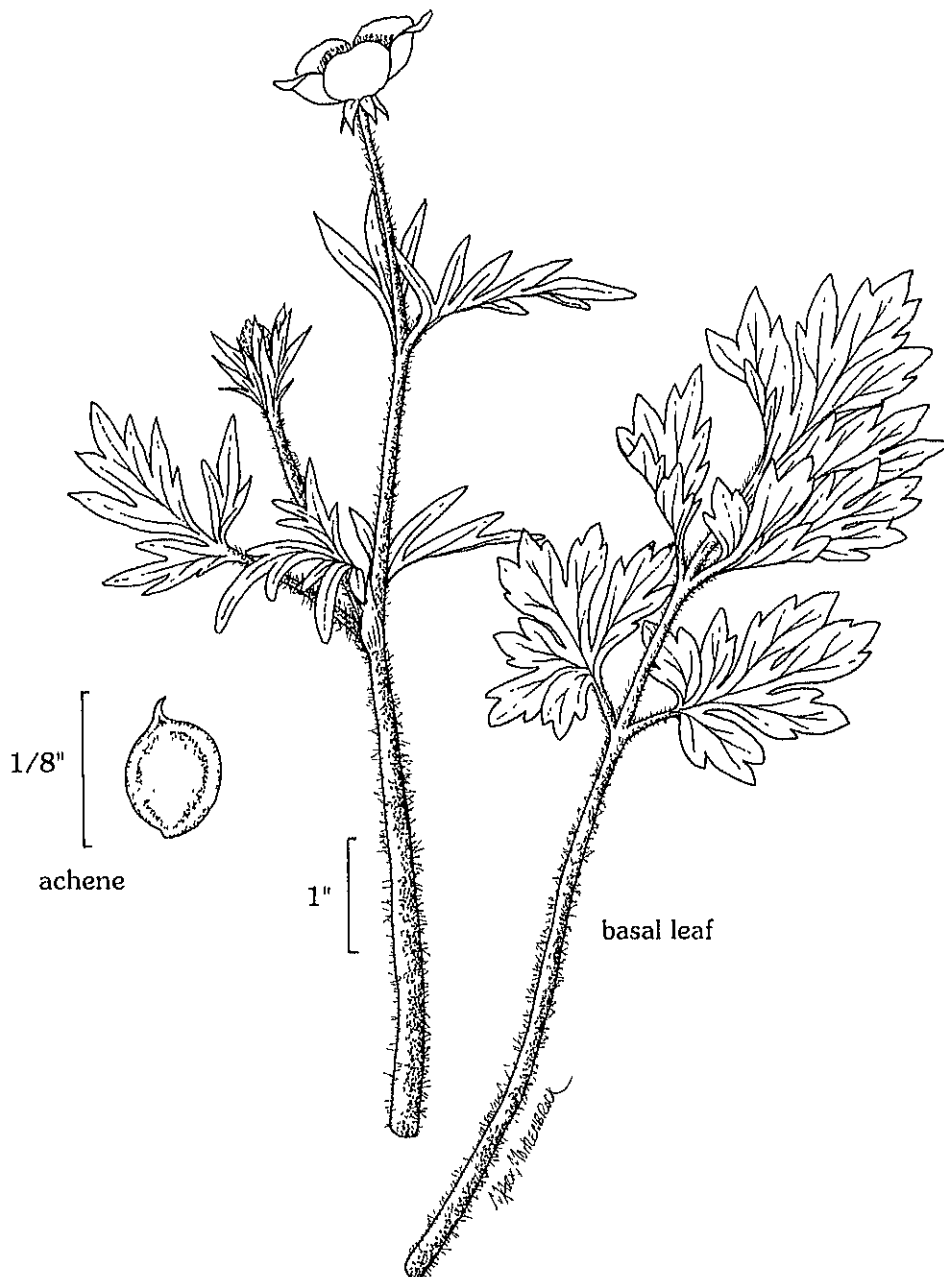
Creeping Butter-cup

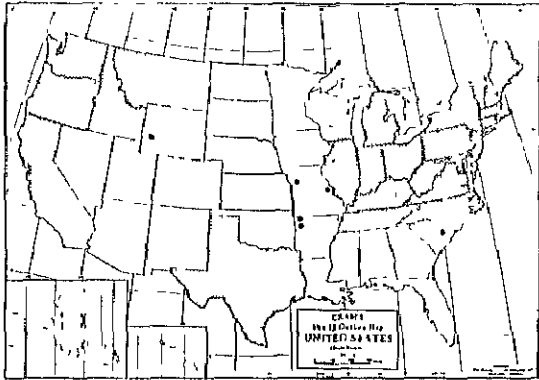
Ranunculus repens L.

Family: Butter-cup (Ranunculaceae)

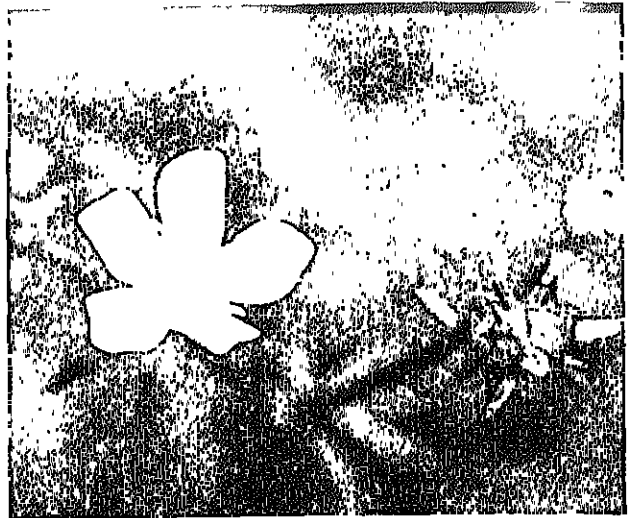
May-August

Field Marks: This large-flowered yellow butter-cup is readily distinguished by its slender stolons that root at the nodes.





Local Notes:



Habitat: Moist, disturbed soil.

Habit: Perennial herb with slender stolons and with thread-like roots.

Stems: Ascending, branched, up to 2 feet tall, hairy.

Leaves: Alternate, ternately compound, the leaflets both lobed and toothed, up to 2 inches long, usually hairy.

Flowers: 1-few on ascending stems, each flower up to 1 1/4 inches across.

Sepals: 5, green, free from each other, up to 1/3 inch long.

Petals: 5, yellow, free from each other, about 1/2 inch long or a little longer.

Stamens: Many.

Pistils: Many in each flower, each with a superior ovary.

Fruits: Achenes up to 25 in a head, each achene obovoid, 1/8-1/6 inch long, with a hooked beak at the tip.

Notes: This butter-cup is native to Europe and Asia. It is sometimes planted in gardens because of its showy flowers. The achenes may be eaten by birds.

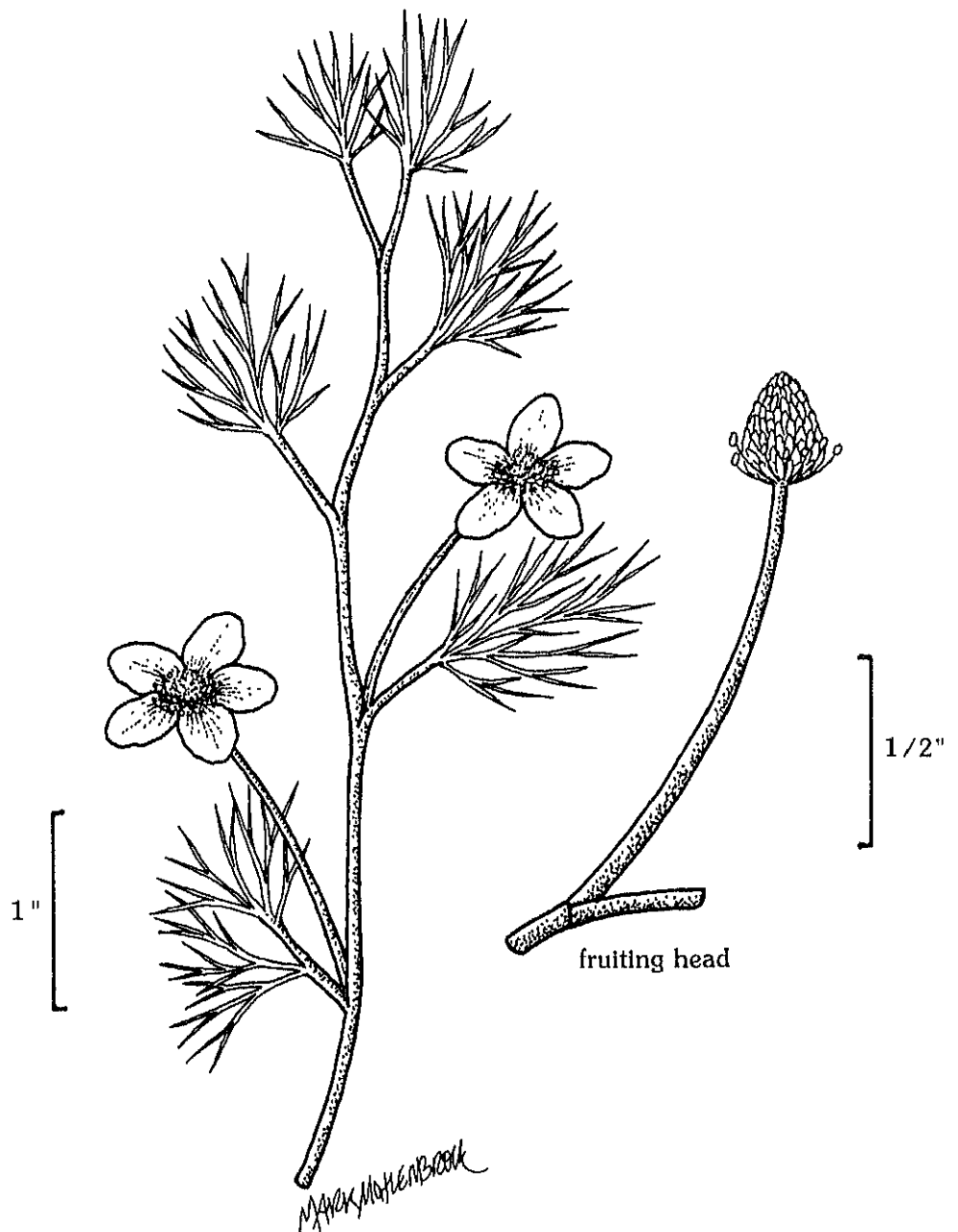
Pond Butter-cup

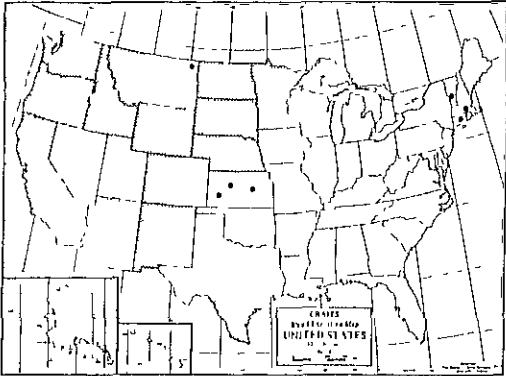
Ranunculus subrigidus W. B. Drew

Family: Butter-cup (Ranunculaceae)

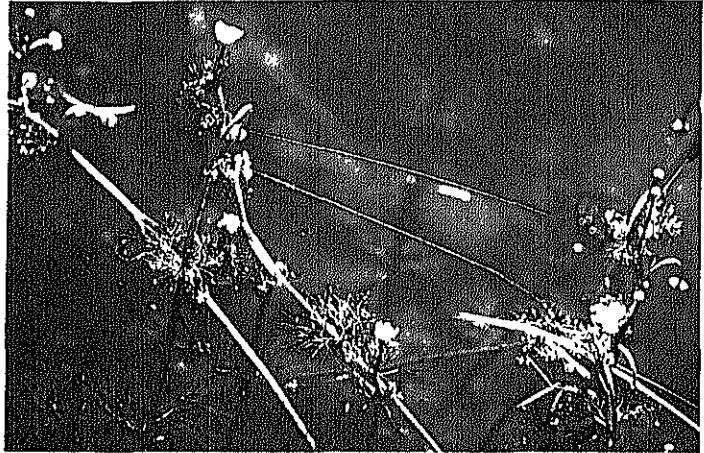
May-July

Field Marks: This is an aquatic, white-flowered butter-cup with much divided submersed leaves and no floating leaves. Its flower stalks become curved by fruiting time.





Local Notes:



Habitat: In ponds, in slow streams.

Habit: Perennial herb with submersed stems.

Stems: Submersed, smooth, up to 2 feet long.

Leaves: All leaves submersed, up to 2 inches long, much divided into thread-like segments, smooth.

Flowers: Several in clusters, up to 3/4 inch across, each flower on a stalk up to 2 inches long.

Sepals: 5, green, free from each other, up to 1/4 inch long.

Petals: 5, white, free from each other, up to nearly 1/2 inch long.

Stamens: 5-10.

Pistils: Many, each with a superior ovary, smooth.

Fruits: Achenes 30 or more in clusters at the tip of a curved stalk, each achene obovoid, up to 1/16 inch long, smooth, with a minute beak.

Notes: The achenes are eaten by waterfowl.

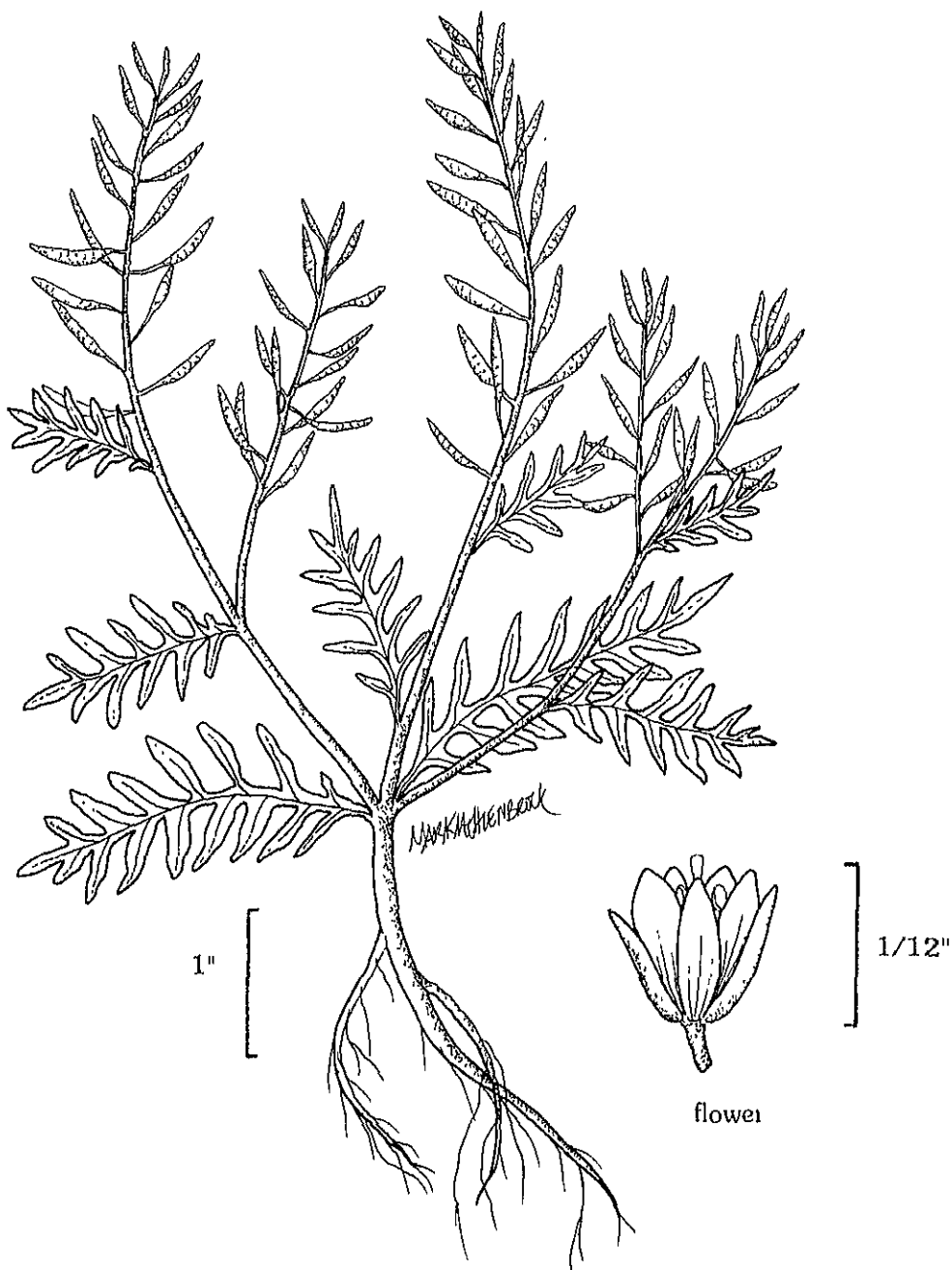
Curve-pod Yellow-cress

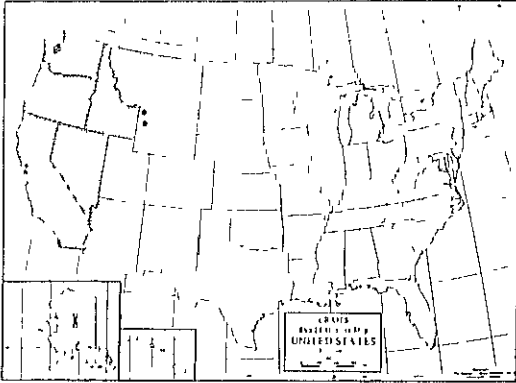
Rorippa curvisiliqua (Hook.) Bessey ex Britton

Family: Mustard (Cruciferae)

March-November

Field Marks: This species has deeply pinnately divided leaves, flowers with 4 small yellow petals, and a strongly curved pod





Local Notes:



Habitat: Most damp or wet areas.

Habit: Annual or biennial herb with fibrous roots.

Stems: Upright, much branched, up to 1 foot tall, smooth.

Leaves: Alternate, deeply pinnately divided, up to 3 inches long, the lobes lanceolate to oblong, toothed or untoothed, smooth

Flowers: Several in short, axillary racemes; each flower on a stalk up to 1/4 inch long

Sepals: 4, green, free from each other, up to 1/12 inch long.

Petals: 4, yellow, free from each other, up to 1/12 inch long.

Stamens: 6

Pistils: Ovary superior, smooth.

Fruits: Pods linear, strongly curved, up to 1/2 inch long, containing many brown seeds.

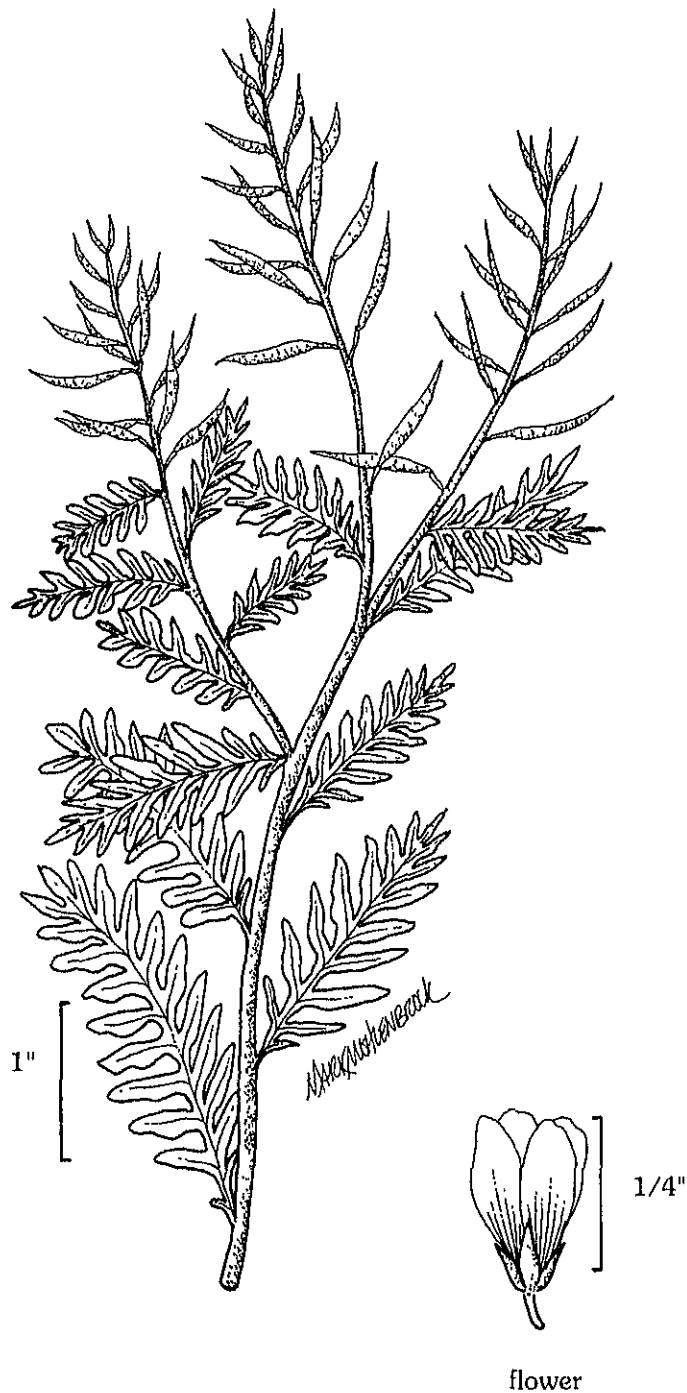
Spreading Yellow-cress

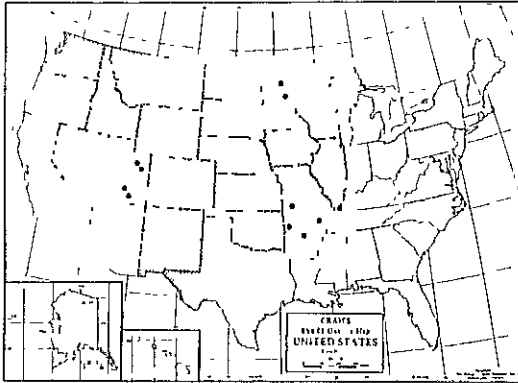
Rorippa sinuata (Nutt.) A. Hitchc.

Family: Mustard (Cruciferae)

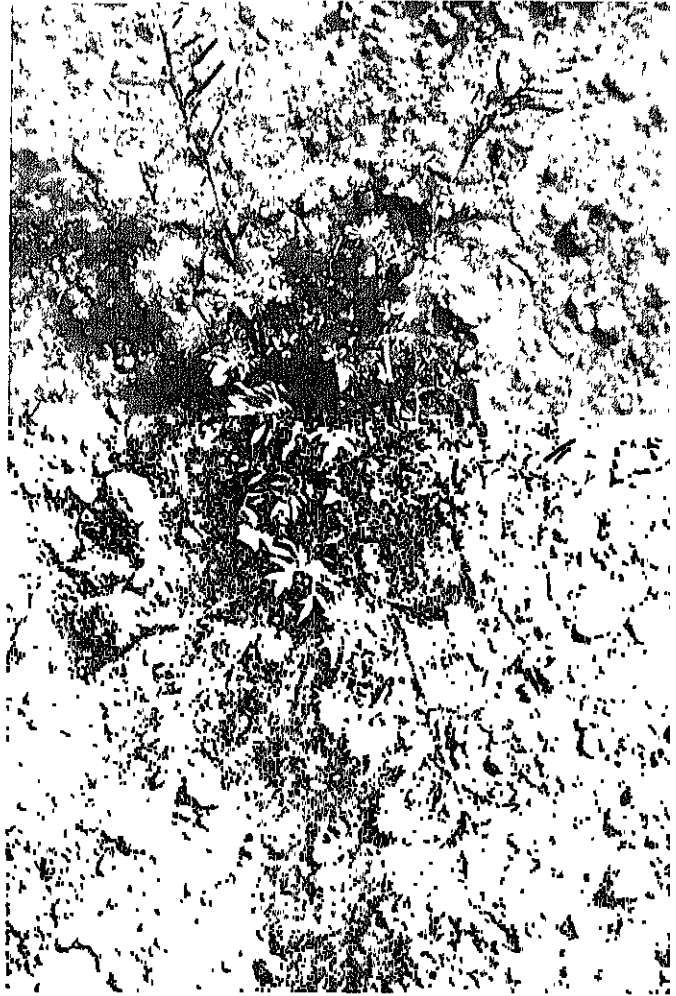
April-September

Field Marks: Unlike other species of *Rorippa*, this one has yellow petals 1/4-1/3 inch long, creeping rootstocks, and slender, more or less straight, pods





Local Notes:



Habitat: Moist areas.

Habit: Perennial herb with creeping rootstocks.

Stems: Upright, branched, up to 1 foot tall, smooth.

Leaves: Alternate, deeply pinnately divided into 11-19 lobes, the lobes linear to oblong, smooth

Flowers: Several in terminal racemes; each flower with a stalk 1/4-1/2 inch long.

Sepals: 4, green, free from each other, up to 1/6 inch long.

Petals: 4, yellow, free from each other, 1/6-1/4 inch long.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Pods linear, more or less straight, 1/3-1/2 inch long, smooth, with small brown seeds.

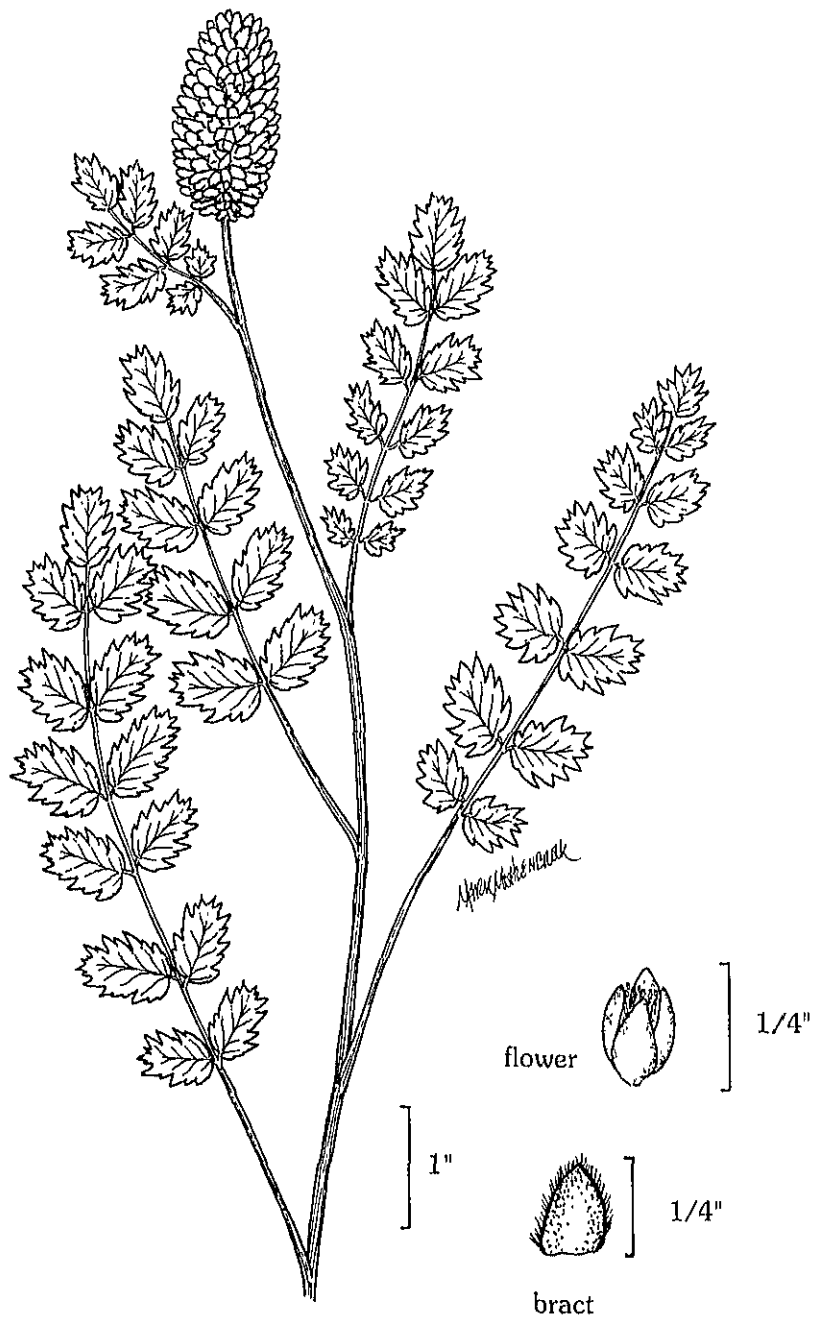
Small Burnet

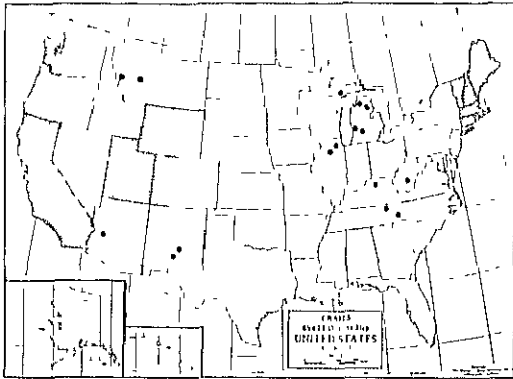
Sanguisorba minor Scop.

Family: Rose (Rosaceae)

May-July

Field Marks: This genus is unusual in the rose family by having flowers with 4 sepals, 0 petals, 12 stamens, and 2 pistils. Each leaf is pinnately compound with 7-21 nearly round, coarsely toothed leaflets.





Local Notes:



Habitat: Often in moist, disturbed soil, including roadsides and fields

Habit: Perennial herb with rhizomes.

Stems: Upright, branched, up to 2 feet tall, hairy.

Leaves: Alternate, pinnately compound with 7-21 leaflets, leaflets nearly round, 1/2-1 inch long, smooth or sparsely hairy, coarsely toothed.

Flowers: Crowded into a dense, spherical to ovoid, greenish head, each flower subtended by a ciliate bract

Sepals: 4, greenish to brown, united below to form a cup bearing small warts on the outer surface, the lobes up to 1/4 inch long

Petals: 0.

Stamens: About 12.

Pistils: 2, free from each other, smooth.

Fruits: Several in an ovoid or spherical head, each achene enclosed by the persistent floral cup up to 1/4 inch long.

Notes: This species is a native of Europe and is frequently seen in cultivation

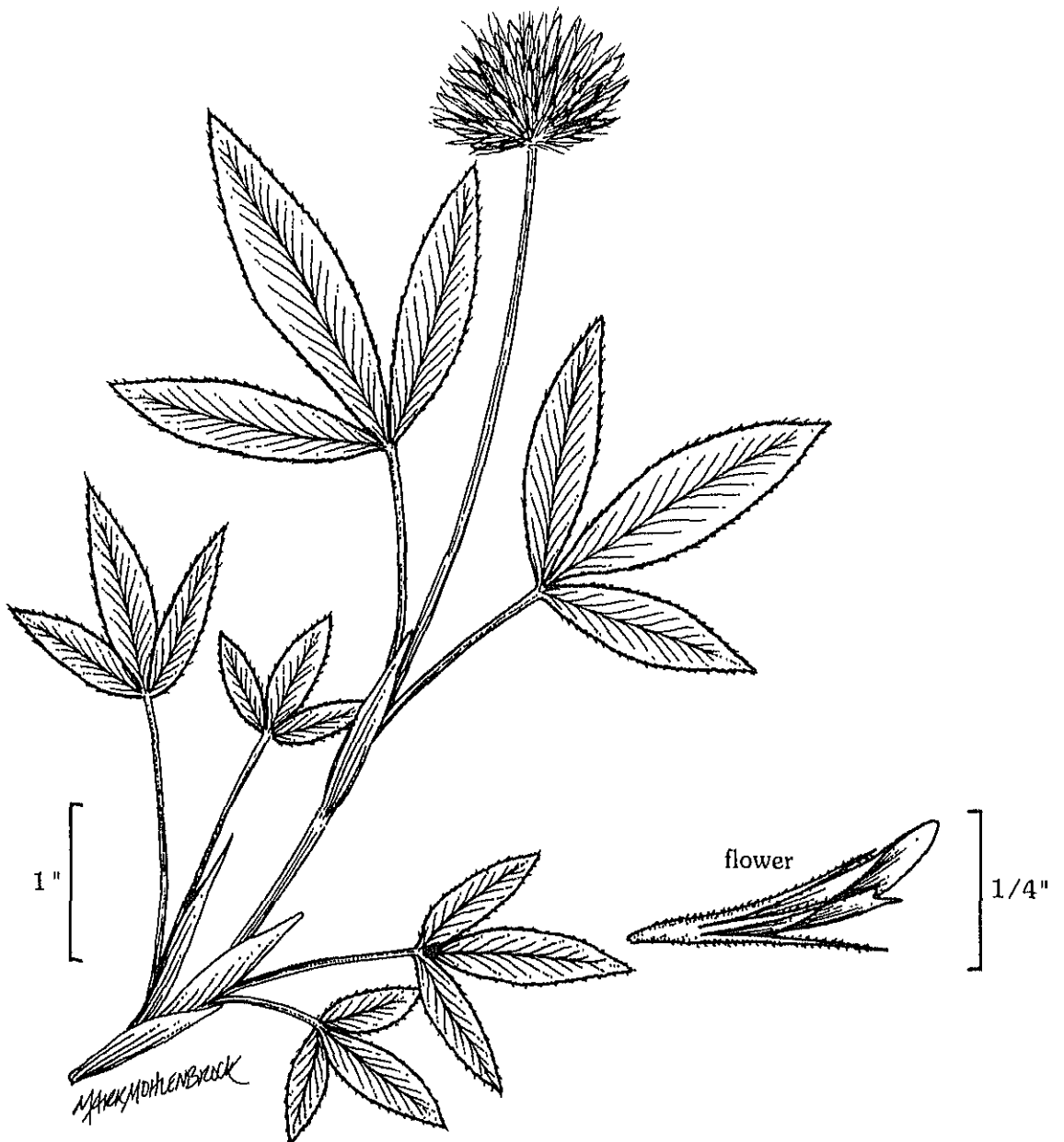
Long-stalk Clover

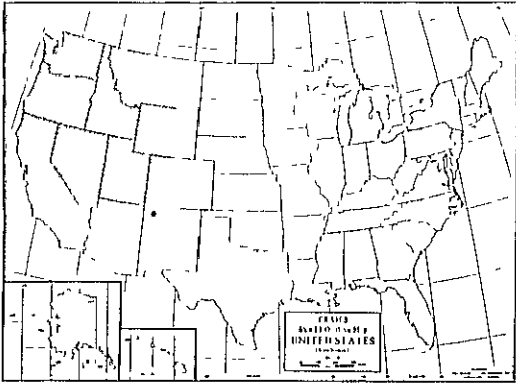
Trifolium longipes Nutt.

Family: Pea (Leguminosae)

June-September

Field Marks: This clover has ovoid heads of white (less commonly pinkish) flowers and leaves on stalks longer than the leaflets.





Local Notes:

Habitat: Wet meadows in the mountains.

Habit: Perennial herb with branched rhizomes and a taproot.

Stems: Spreading to erect, up to 21 inches long, smooth or with some appressed hairs.

Leaves: Alternate, divided into 3 leaflets; each leaflet narrow, lanceolate to obovate, pointed or rounded at the tip, tapering to the base, up to 2 inches long, finely toothed, hairy on lower surface; leaf stalks longer than the leaflets; stipules lanceolate, up to 1 inch long.

Flowers: Many crowded into ovoid heads up to $\frac{2}{3}$ inch across, on long stalks up to 6 inches long.

Sepals: 5, united below into a tube, $\frac{1}{3}$ to nearly $\frac{1}{2}$ inch long, the slender teeth longer than the tube, hairy.

Petals: 5, white (less commonly pinkish), arranged to form a sweet pea-shaped flower $\frac{1}{3}$ - $\frac{1}{2}$ inch long.

Stamens: 10.

Pistils: Ovary superior, hairy.

Fruits: Pods a little longer than broad, hairy near the tip, containing 2-4 seeds.

Notes: The petals of this species sometimes also may be tinged with purple. The fruits and leaves are eaten by some mammals.

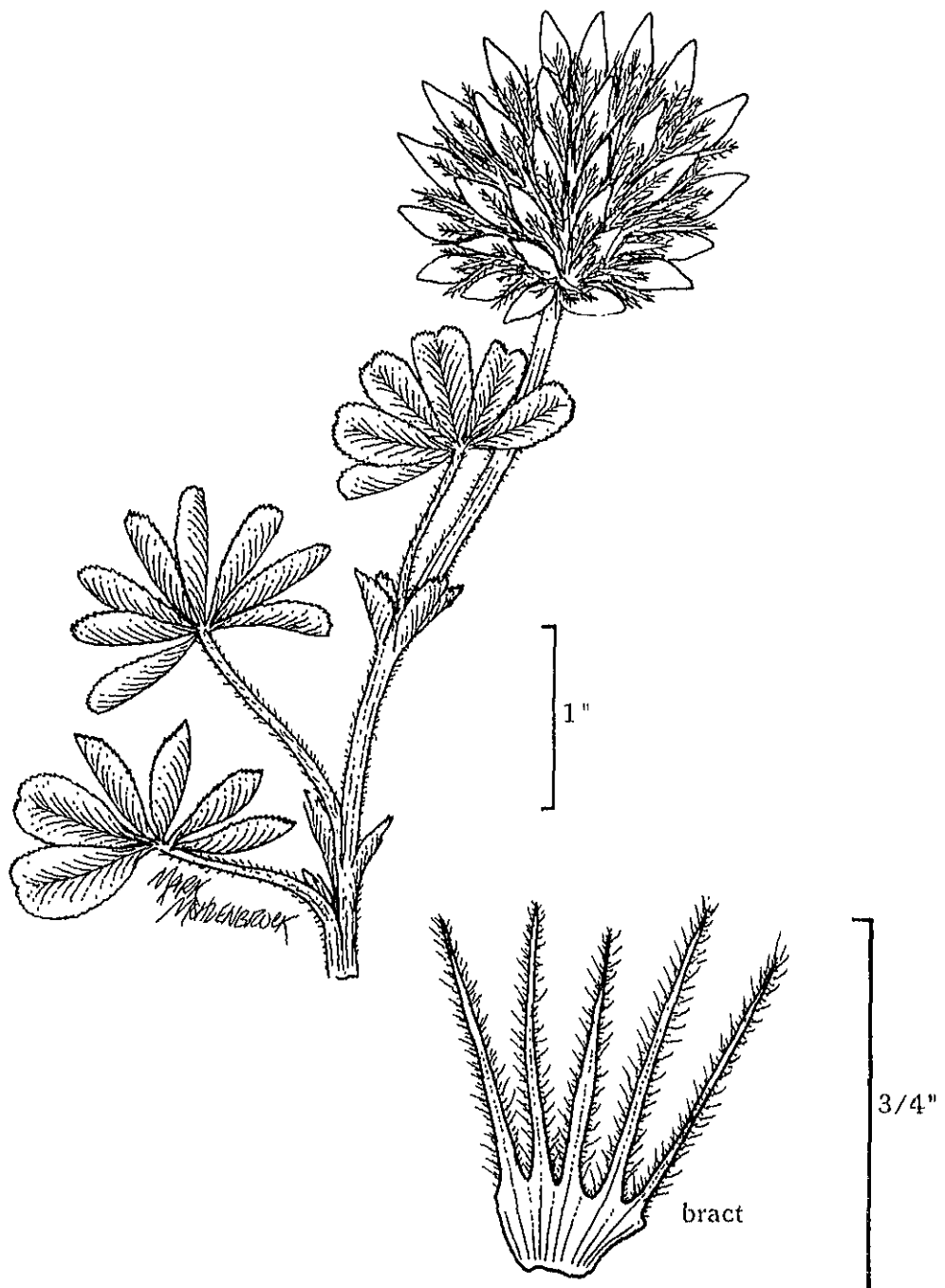
Large-head Clover

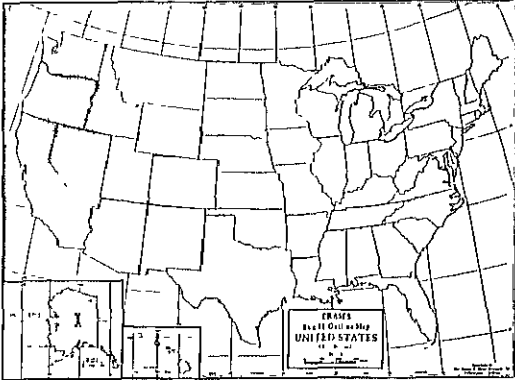
Trifolium macrocephalum (Pursh) Poir.

Family: Pea (Leguminosae)

April-May

Field Marks: The field marks for this clover are purple or purplish flowers in heads up to 1 1/2 inches long and its leaves with 4, 7, or 9 leaflets





Local Notes:



Habitat: Wet meadows; also on slopes and in sagebrush.

Habit: Perennial herb with thickened rootstocks, forming loose mats.

Stems: Spreading, rather stout, sparsely long-hairy, up to 1 foot long.

Leaves: Alternate, on stalks up to 3 inches long, divided into 5, 7, or 9 leaflets; leaflets 1/2-1 inch long, oblong to obovate, rounded at the tip, tapering to the base, sparsely toothed, sparsely hairy; stipules ovate to oblong, up to 1 inch long, sparsely toothed.

Flowers: Many in an ovoid head up to 1 1/2 inches long, the head on a stalk up to 1 1/2 inches long; each flower on stalks up to 1/20 inch long; bracts bristly.

Sepals: 5, green, 1/2-1 inch long, united below, the lobes very narrow and pointed, long-hairy.

Petals: 5, purple or purplish, up to 1 1/2 inches long, arranged in the form of a sweetpea flower.

Stamens: 10.

Pistils: Ovary superior.

Fruits: Pods smooth, up to 1/4 inch long, on a short stalk, usually about 6-seeded.

Red Clover

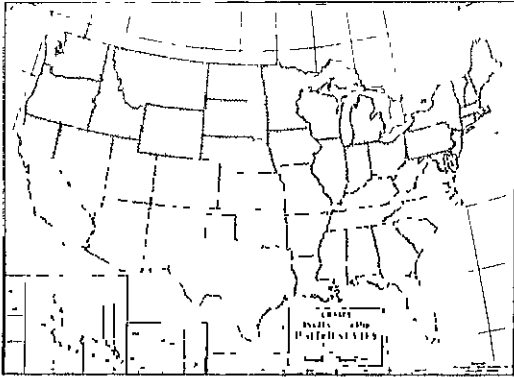
Trifolium pratense L.

Family: Pea (Leguminosae)

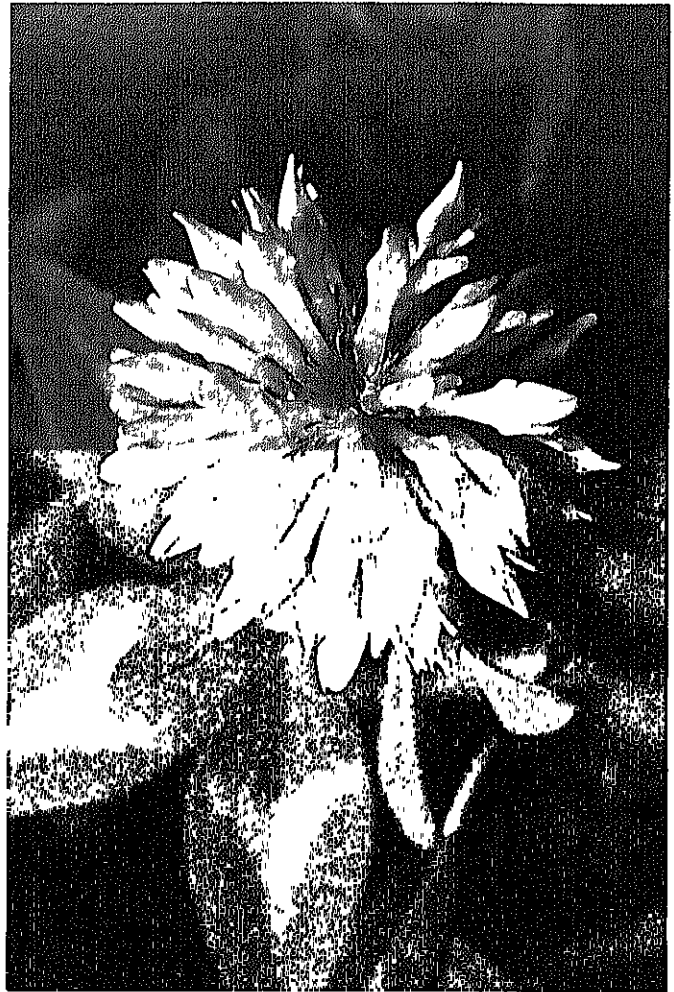
May-October

Field Marks: This is the only perennial clover that has pink to reddish purple flowers that are at least 1/2 inch long and are sessile





Local Notes:



Habitat: In a wide variety of moist or dry habitats, including old fields, pastures, roadsides, and other disturbed, open areas.

Habit: Spreading to upright perennial herb with a taproot.

Stems: Spreading to upright, branched, up to 3 feet long, usually with a few to many soft hairs, sometimes hollow.

Leaves: Alternate, divided into 3 leaflets; each leaflet obovate to elliptic, up to 2 1/2 inches long, more or less hairy on both surfaces, often with an inverted V visible on the upper surface.

Flowers: Sessile, up to 80 in a head; each head spherical, up to 1 inch across, subtended by a trifoliate bract; heads sessile or on stalks up to 1 inch long.

Sepals: 5, green, united to form a tube, the tube up to 1/4 inch long, smooth or sparsely hairy, one of the 5 lobes longer than the other 4.

Petals: United to form a pea-shaped flower, pink to reddish purple, 1/2 to nearly 1 inch long.

Stamens: 10, with 1 of them separate from the other 9.

Pistils: Ovary superior.

Fruits: Pods ovoid, with 1-2 seeds; seeds asymmetrical, yellow-brown or yellow-green, up to 1/10 inch long.

Notes: This species was introduced from Europe and is a good pasture plant as well as a species that can bind the soil and add nitrogen to it.

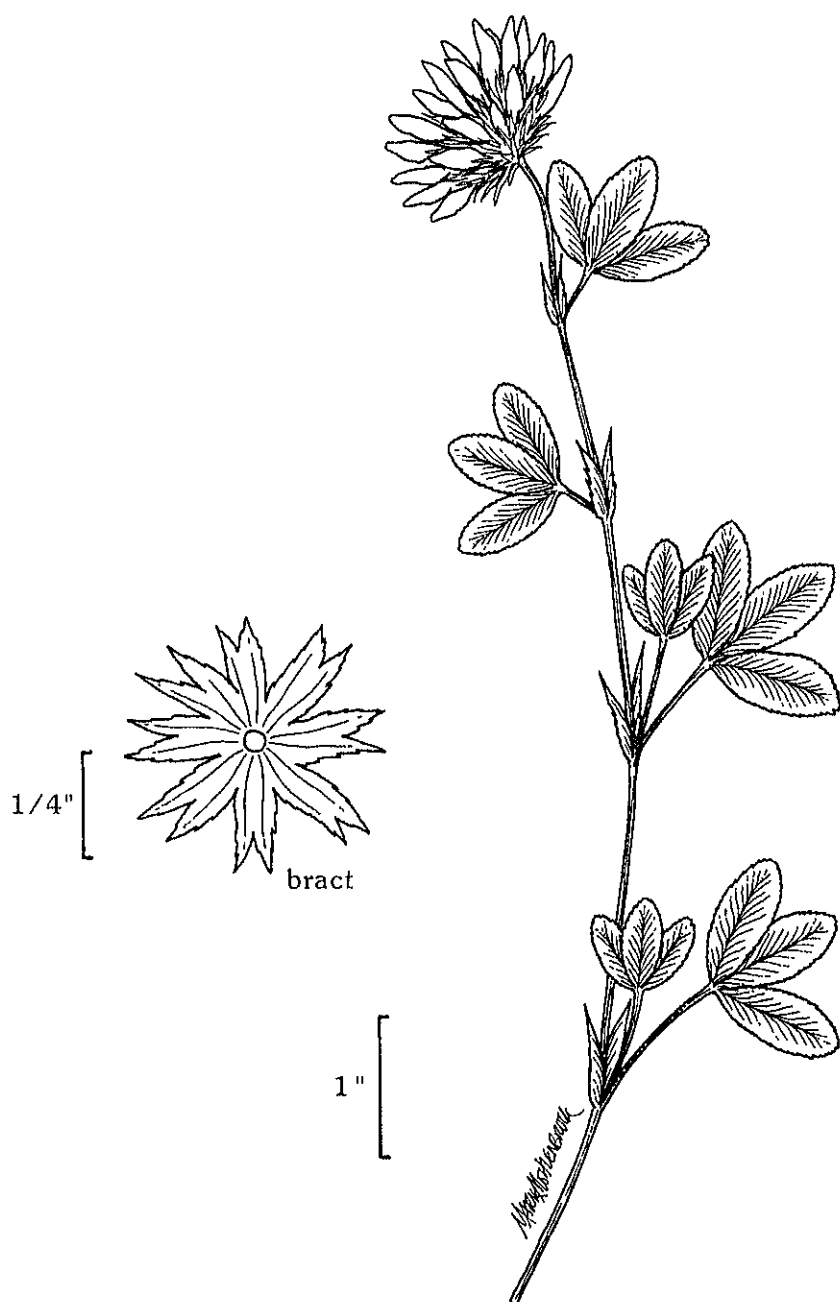
Cows Clover

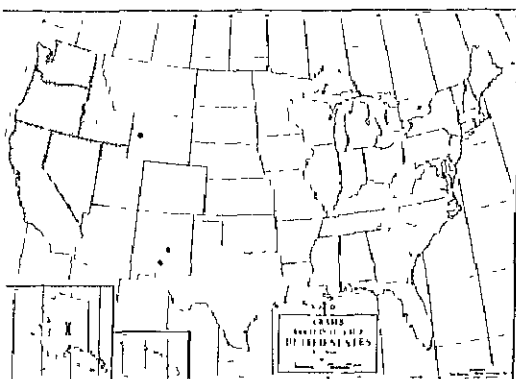
Trifolium wormskioldii Lehm.

Family: Pea (Leguminosae)

May-October

Field Marks: The nearly round heads of white and purple flowers are subtended by a flat, lobed and toothed bract. There are creeping rhizomes present.





Local Notes:



Habitat: Most moist areas

Habit: Perennial herb with creeping rhizomes.

Stems: Spreading, branched, up to 1 foot long, smooth.

Leaves: Alternate, divided into 3 leaflets; leaflets oblanceolate to obovate, rounded at the tip and at the base, up to 1 1/2 inches long, toothed, smooth; leaf stalks up to 3 inches long; leaflets sessile or nearly so; stipules lanceolate, deeply toothed.

Flowers: Many in rounded heads up to 1 1/2 inches in diameter, white and purple, each head on a stalk up to 2 1/2 inches long and subtended by a lobed and toothed bract, the bract up to 3/4 inch across and flat.

Sepals: 5, green, united to form a tube, up to nearly 1/2 inch long, the 5 awn-like teeth longer than the tube, smooth.

Petals: 5, white and purple, arranged in the shape of a sweetpea flower, up to 1/2 inch long.

Stamens: 10.

Pistils: Ovary superior, smooth

Fruits: Pods ovoid, smooth, with 2-6 seeds.

Notes: Deer browse on this species.

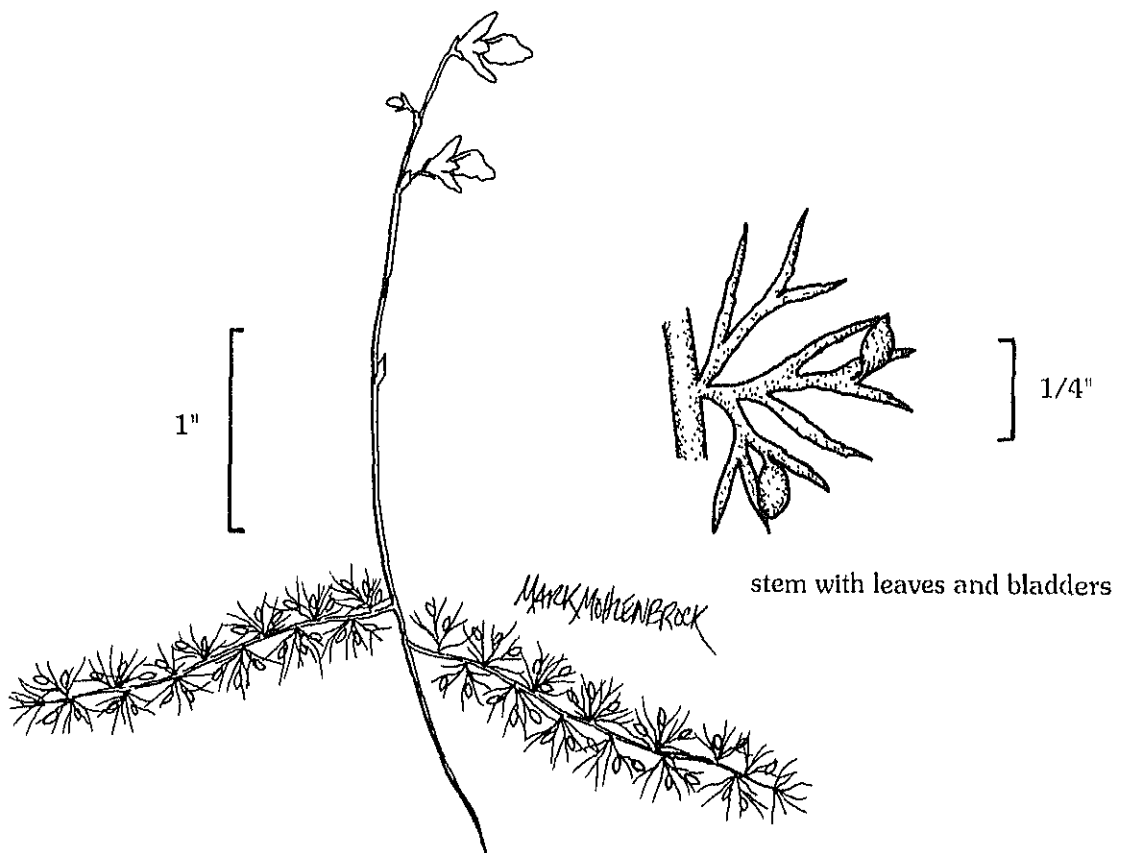
Lesser Bladderwort

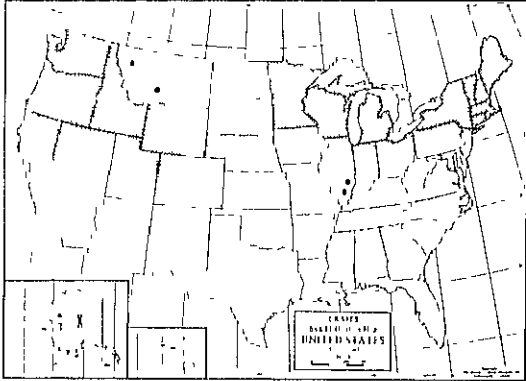
Utricularia minor L.

Family: Bladderwort (Lentibulariaceae)

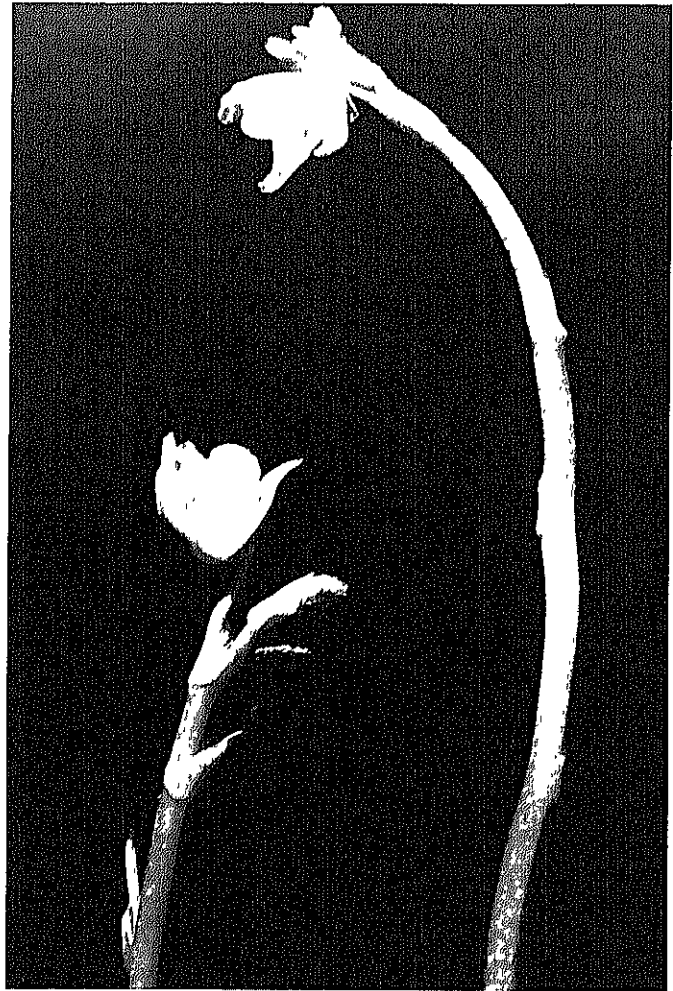
July-September

Field Marks: This bladderwort has 2-9 yellow flowers in an uncrowded raceme. The stalks of the fruits are arched and recurved. The petals are only about 1/3 to nearly 1/2 inch long





Local Notes:



Habitat: In streams and in shallow ponds.

Habit: Perennial herb with winter buds (turions).

Stems: All submersed, thread-like, much branched.

Leaves: Numerous, alternate, divided several times, each segment flat, linear, pointed at the tip, bladders up to 1/12 inch in diameter, attached to the leaves.

Flowers: 2-9 in an uncrowded raceme on a leafless stalk up to 10 inches long, flower stalks becoming arched and recurved.

Sepals: United to form 2 lips, green, each lip up to 1/8 inch long, the upper lip slightly longer than the lower lip.

Petals: 5, pale yellow, united to form 2 lips, up to 1/3 inch long, with a spur up to 1/8 inch long.

Stamens: 2, the anthers twisted.

Pistils: Ovary 1, superior, smooth.

Fruits: Capsules nearly spherical, about 1/10 inch in diameter.

Notes: This species is able to trap minute aquatic organisms in its underwater bladders and utilize some of its prey for its own nutritional value.

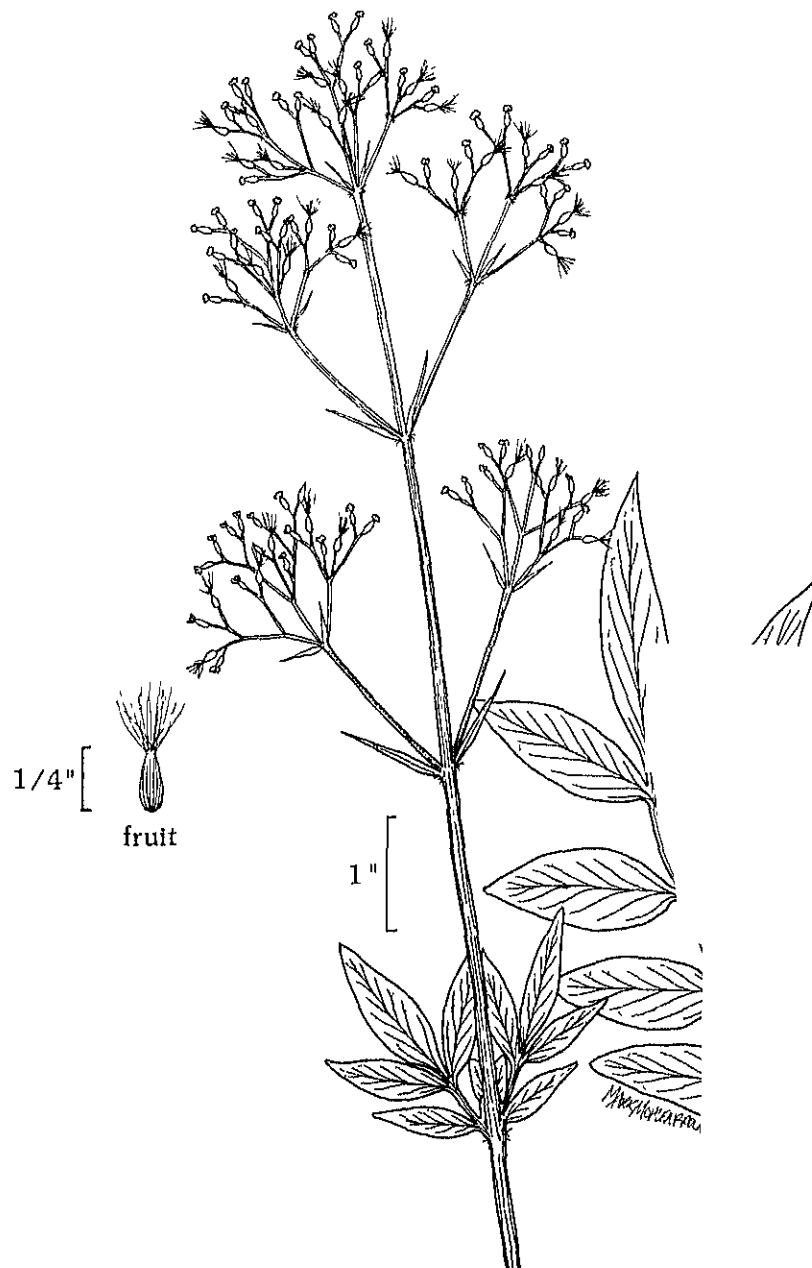
Western Valerian

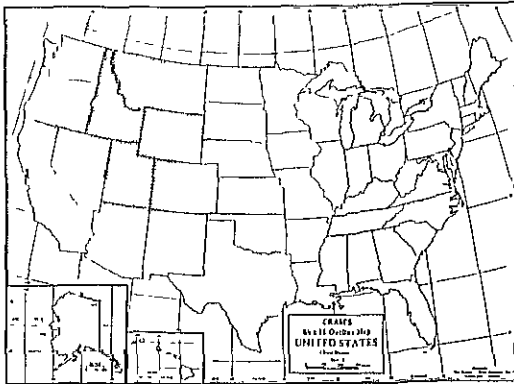
Valeriana occidentalis A. Heller

Family: Valerian (Valerianaceae)

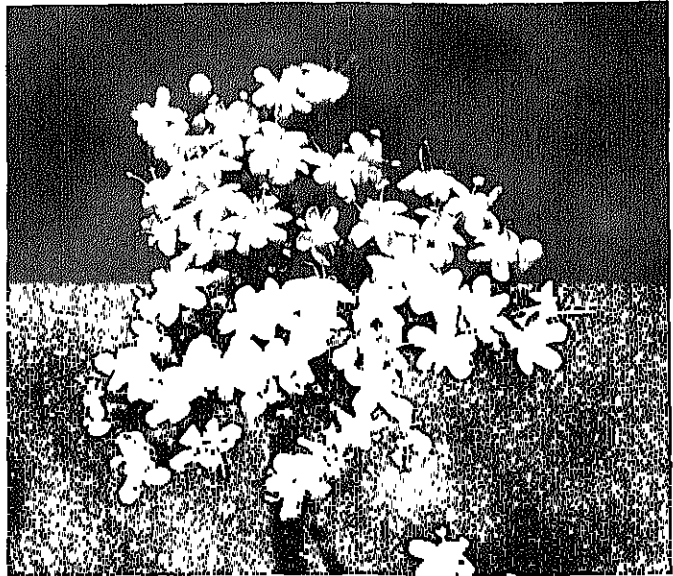
May-September

Field Marks: The distinguishing features of this species are the pinnate opposite leaves and the tuft of white hairs at the nodes on the stem





Local Notes:



Habitat: Wet meadows, moist soil.

Habit: Perennial herb from rhizomes.

Stems: Upright, up to 2 1/2 feet tall, smooth or nearly so except for a tuft of white hairs at the nodes.

Leaves: Basal and opposite on the stem, simple or pinnately divided into as many as 13 segments, oblong to narrowly ovate, smooth or nearly so.

Flowers: Several crowded in a terminal cyme, the cyme up to 2 1/2 inches long; bracts up to 1/4 inch long.

Sepals: Nearly absent and inconspicuous in flower, developing into as many as 16 plume-like bristles during fruiting.

Petals: 5, white, united below, 1/8-1/6 inch long.

Stamens: 3, attached to the petals.

Pistils: Ovary inferior.

Fruits: Achenes linear to narrowly oblong, tan, up to 1/4 inch long, with plumose bristles at the top.

Notes: The leaves and stems are browsed by deer and elk.

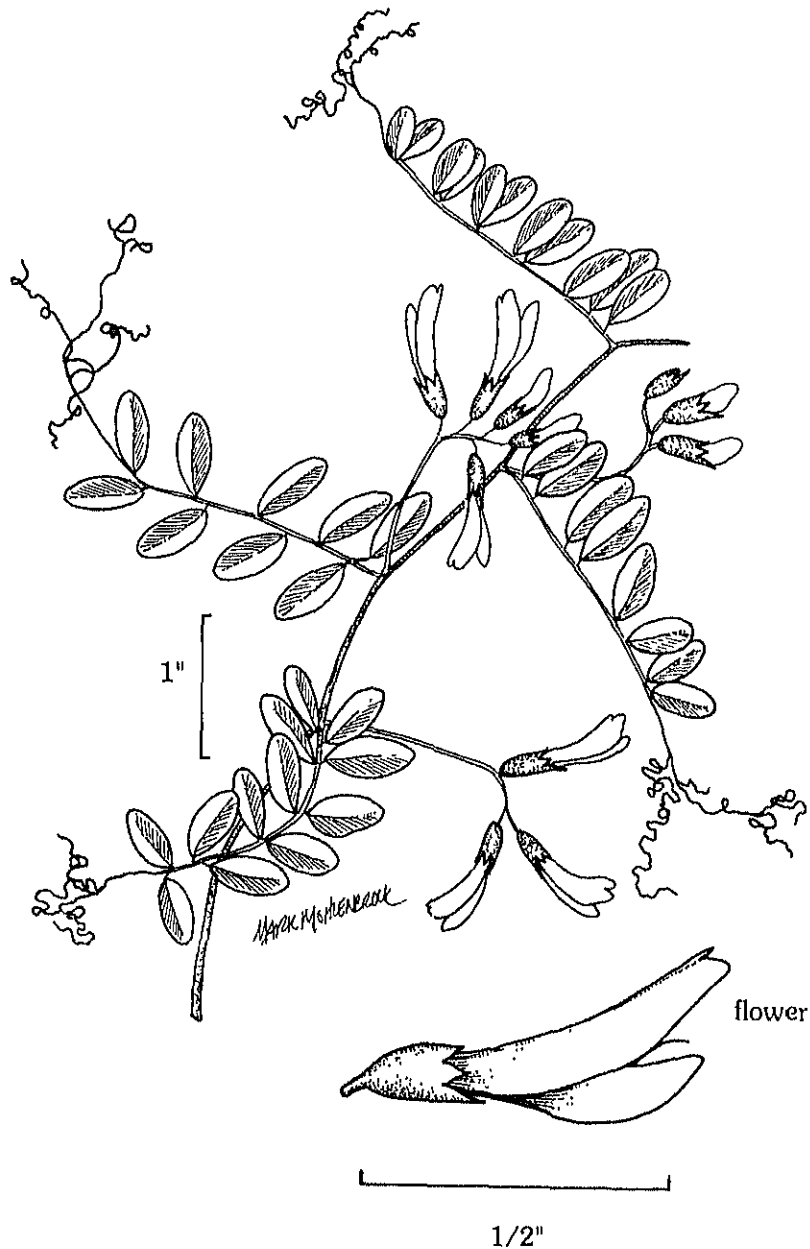
American Purple Vetch

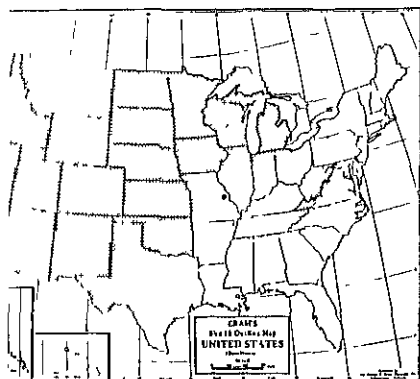
Vicia americana Muhl. ex Willd.

Family: Pea (Leguminosae)

May-August

Field Marks: This vetch is distinguished by its racemes of only 2-10 flowers and its large flowers 1/2-1 inch long.





Notes:

Habitat: Along streams, damp thickets, prairies, roadsides, open places.

Habit: Sprawling perennial vine, sometimes scrambling over other vegetation.

Stems: Sprawling or climbing, up to 3 feet long, smooth or sometimes hairy.

Leaves: Alternate, pinnately compound, with 4-16 leaflets and a branched tendril where a terminal leaflet should be; leaflets linear to oblong to ovate, up to 2 inches long, rounded but with a small projection at the tip, with or without teeth, smooth or hairy.

Flowers: Flowers 2-9 in racemes from the axils of the leaves, the racemes on stalks shorter than the leaves.

Sepals: 5, united below, green, the tube up to 1/4 inch long, the teeth very unequal in size and shape.

Petals: 5, purple, up to 1 inch long, with the configuration of a sweetpea flower.

Stamens: 10.

Pistils: Ovary superior, smooth

Fruits: Pods up to nearly 2 inches long, up to nearly 1/2 inch wide, smooth, containing 8-14 seeds; seeds black, 1/6-1/4 inch in diameter

Notes: There is considerable variation in leaflet size and number.

GROUP 7

**Dicot Herbs with Most
or All of the Leaves Simple
and Opposite or Whorled**

GROUP 7

**Dicot Herbs with Most
or All of the Leaves Simple
and Opposite or Whorled**

Streambank Arnica

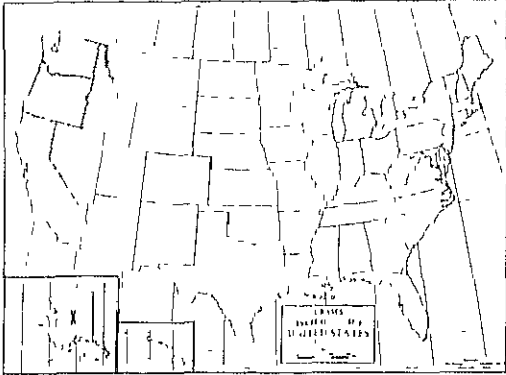
Arnica amplexicaulis Nutt.

Family: Composite (Compositae)

July-August

Field Marks: This species has 5-12 pairs of opposite, toothed leaves on the stem and pointed bracts subtending the flower heads.





Local Notes:



Habitat: Along streams, moist woods.

Habit: Perennial herb with much branched rhizomes.

Stems: Upright, usually unbranched, up to 2 1/2 feet tall, usually glandular-hairy, sometimes more or less smooth.

Leaves: Opposite, simple, with 5-12 pairs on the stem, lanceolate to narrowly ovate, up to 4 1/2 inches long, pointed or somewhat rounded at the tip, rounded at the base, toothed, glandular-hairy or nearly smooth.

Flowers: Crowded into heads up to 2 inches across, consisting of 8-14 pale yellow rays and a yellow disk; each head subtended by narrow pointed bracts 1/2-3/4 inch long.

Sepals: 0.

Petals: 5, some of them united to form rays 1/2-1 inch long, others united to form tubular flowers in a central disk.

Stamens: 5.

Pistils: Ovary inferior, hairy

Fruits: Achenes sparsely hairy, with a tuft of tawny-colored soft bristles at the tip

Leafy Arnica

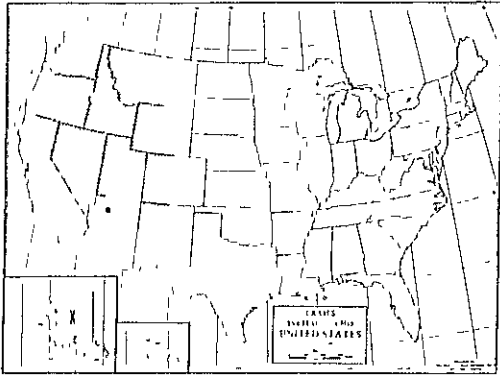
Arnica chamissonis Less.

Family: Composite (Compositae)

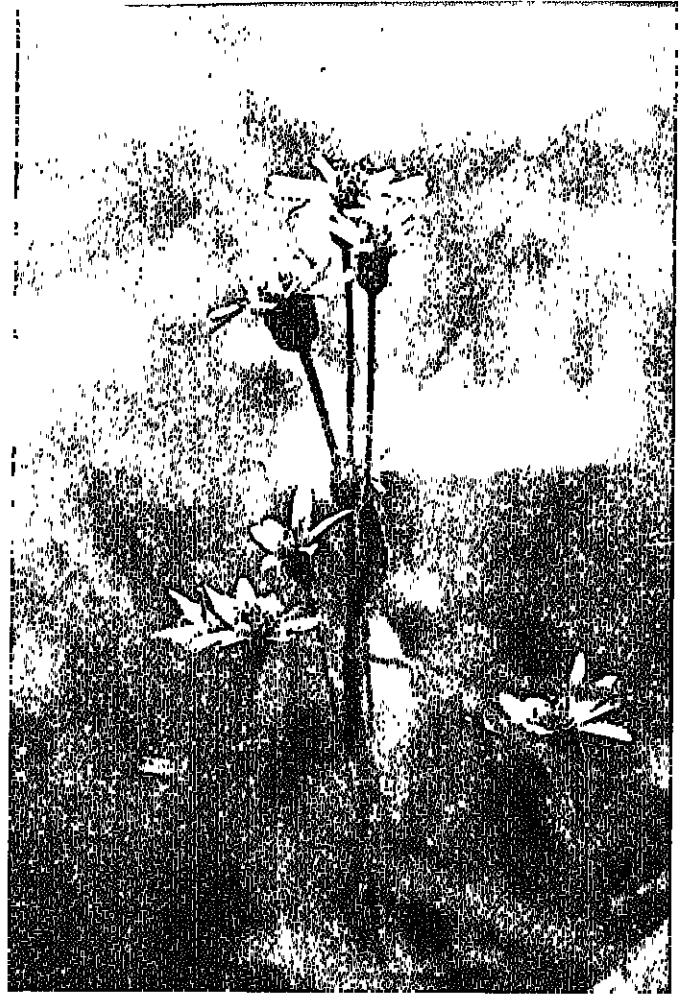
June-August

Field Marks: This species differs from other species of *Arnica* by having 5-10 pairs of leaves on the stem and pale yellow flower heads up to 2 inches across, with each head subtended by bracts with a rounded tip and a tuft of hairs at the tip of the bract





Local Notes:



Habitat: Wet meadows and other moist places in the mountains.

Habit: Perennial herb with elongated rhizomes.

Stems: Upright, unbranched, up to 2 1/2 feet tall, hairy, with the hairs sometimes glandular and sticky.

Leaves: Opposite, simple, with 5-10 pairs per stem, lanceolate to oblanceolate, up to 8 inches long, up to 2 inches wide, hairy, with or without teeth, all but the lowermost sessile.

Flowers: Crowded into heads up to 2 inches across, pale yellow, with 12-18 ray flowers and many disk flowers; heads subtended by several bracts, the bracts rounded at the tip, up to 1/2 inch long, with a tuft of hairs at the tip.

Sepals: 0.

Petals: 5, pale yellow, some of them united to form a ray, others united to form a tube.

Stamens: 5.

Pistils: Ovary inferior, somewhat hairy.

Fruits: Achenes usually somewhat hairy, narrowly ellipsoid, up to 1/4 inch long, with a tuft of tawny bristles at the tip.

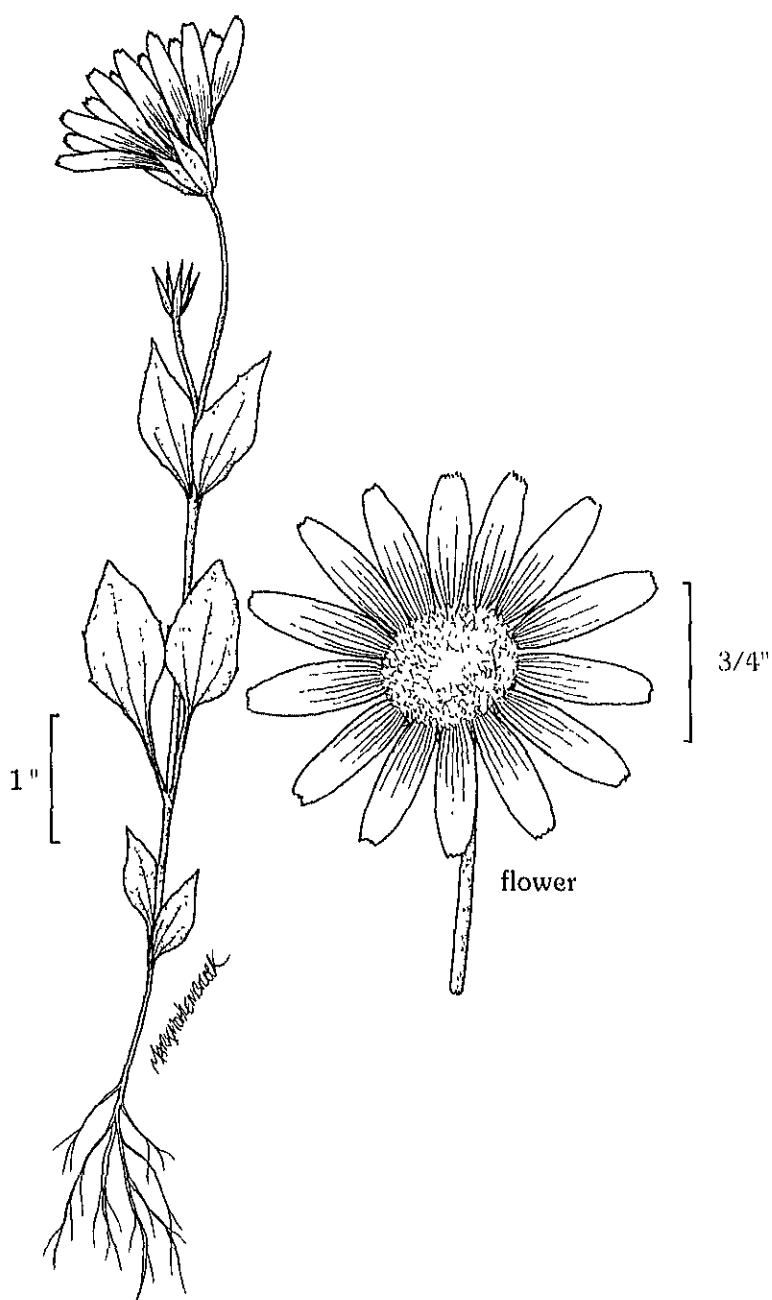
Sticky-leaf Arnica

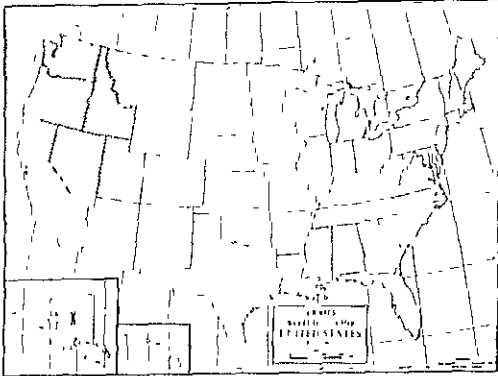
Arnica diversifolia Greene

Family: Composite (Compositae)

July-September

Field Marks: This *Arnica* has 3 or 4 pairs of irregularly toothed leaves on the stem, flower heads with 8-15 pale yellow rays 3/4-1 inch long, and tawny-colored soft bristles on the achenes





Local Notes:



Habitat: Wet, often rocky, areas.

Habit: Perennial herb with branching rhizomes.

Stems: Upright, unbranched, up to 15 inches tall, smooth or glandular-hairy.

Leaves: Leaves on the stem 3-4 pairs, opposite, elliptic to ovate, up to 2 1/2 inches long, up to 2 1/2 inches wide, rounded or pointed at the tip, rounded at the base, irregularly toothed, rough-hairy, sessile or on short stalks; basal leaves, if present, smaller, on stalks.

Flowers: Crowded into heads, with few to several heads at the tip of the stem; heads up to 2 inches across, bearing both ray flowers and disk flowers; heads subtended by pointed, narrow, green bracts that have some long hairs, some of which may be glandular.

Sepals: 0.

Petals: Some united to form 8-15 pale yellow rays 3/4-1 inch long; others united into tubes that comprise the central yellow disk.

Stamens: 5.

Pistils: Ovary inferior, hairy.

Fruits: Achenes short-hairy, with tawny soft bristles at the tip.

Notes: This is a rather variable species, similar to *A. mollis* but differing mostly by having the stem leaves larger than the basal leaves.

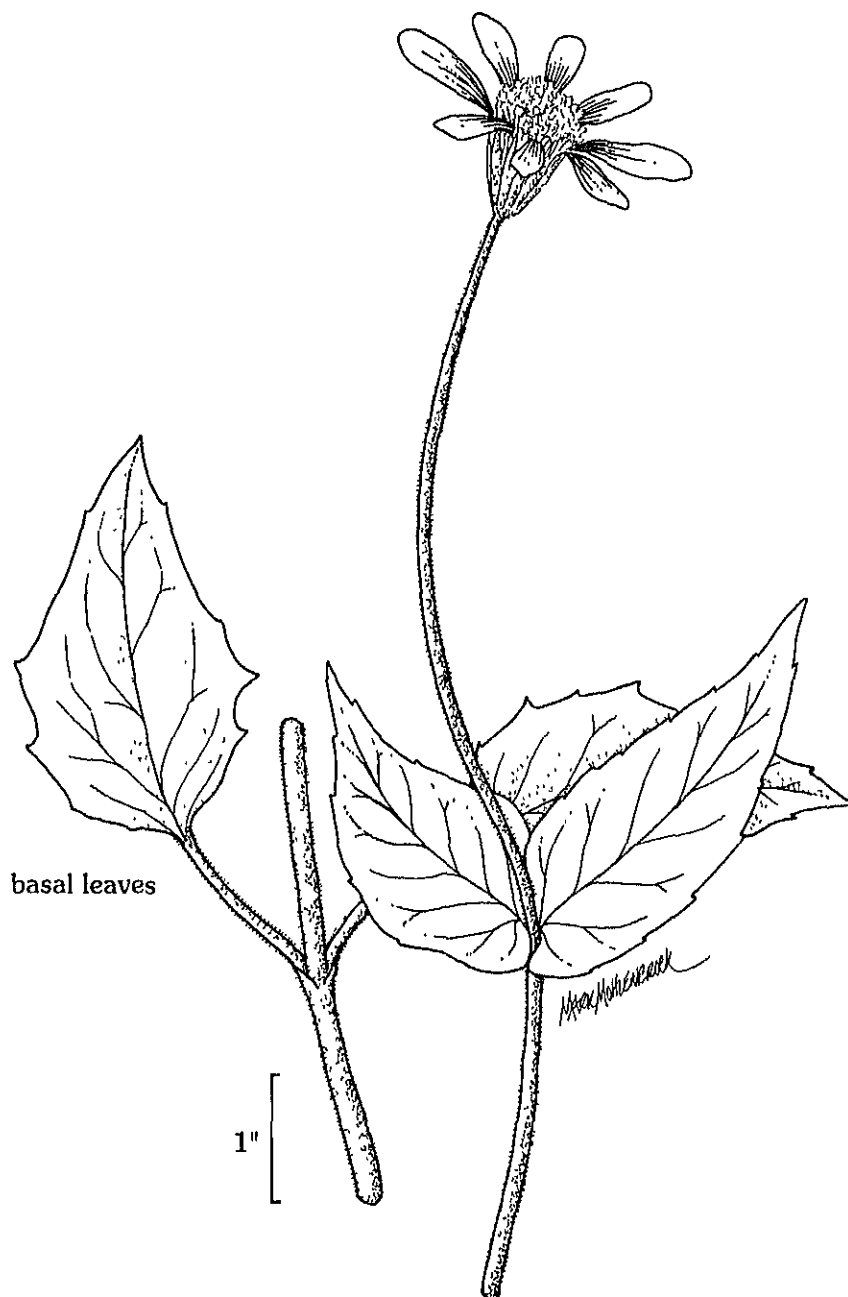
Mountain Arnica

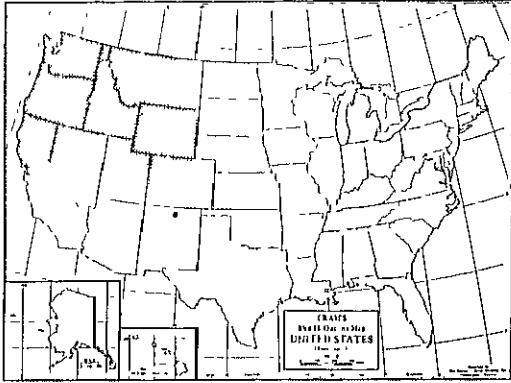
Arnica latifolia Bong.

Family: Composite (Compositae)

June-August

Field Marks: This plant differs from other species of *Arnica* by its sessile cauline leaves, 1-3 flowering heads, basal leaves that are not heart-shaped at the base, and brown achenes.





Local Notes:



Habitat: Moist forests and wet meadows in the mountains.

Habit: Perennial herb with slender, elongated rhizomes.

Stems: Upright, up to 2 feet tall, mostly smooth.

Leaves: Basal and cauline, sometimes glandular, sometimes hairy, toothed, the basal ones ovate to lanceolate, usually pointed at the tip, truncate or rounded at the base but not heart-shaped, up to 10 inches long, with a distinct stalk, the cauline leaves 2-4 pairs, opposite, sessile, up to 5 inches long, rounded or pointed at the tip.

Flowers: Several crowded together into usually 1-3 heads; each head up to 2 inches across, subtended by lanceolate, pointed, green, usually hairy and often glandular bracts, with 8-12 yellow rays and central yellow disk.

Sepals: 0.

Petals: Some united to form yellow rays 1/2-1 inch long, others united to form yellow tubular flowers in a central disk.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes brown, smooth or minutely hairy, with a tuft of white hairs.

Notes: At higher elevations, a dwarf variation of this plant occurs. It is sometimes referred to as var. *gracilis*.

Seep Spring Arnica

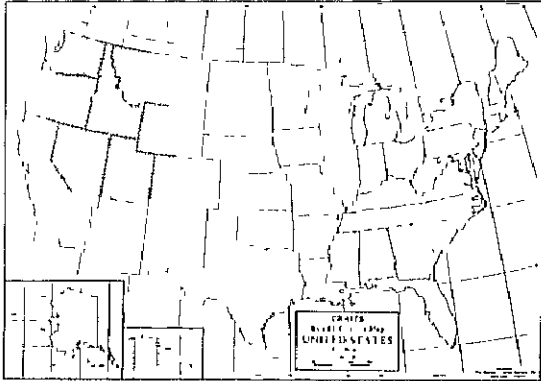
Arnica longifolia D.C. Eat.

Family: Composite (Compositae)

July-August

Field Marks: This *Arnica* is distinguished by its 5-7 pairs of sessile, toothless leaves on the stem





Local Notes:



Habitat: Around springs, along rivers, wet places in woods.

Habit: Perennial herb with a thickened rootstock and often short rhizomes

Stems: Up to 2 feet tall, sparsely hairy, some of the stems often not bearing flower heads.

Leaves: Opposite, simple, 5-7 pairs per stem, lanceolate to narrowly elliptic, up to 4 inches long, pointed at the tip, tapering to the sessile or somewhat clasping base, sparsely hairy, usually without teeth.

Flowers: Borne in heads 1-2 inches across, each head consisting of 8-13 yellow ray flowers and several yellow disk flowers; bracts subtending each head long-pointed at the tip, glandular-hairy.

Sepals: 0.

Petals: 5, some united to form yellow rays, others united to form short yellow tubes that comprise the disk

Stamens: 5.

Pistils: Ovary inferior, smooth or hairy.

Fruits: Achenes elongated, smooth or hairy, with a tuft of tawny hairs at the tip.

Notes: The achenes may be eaten by birds.

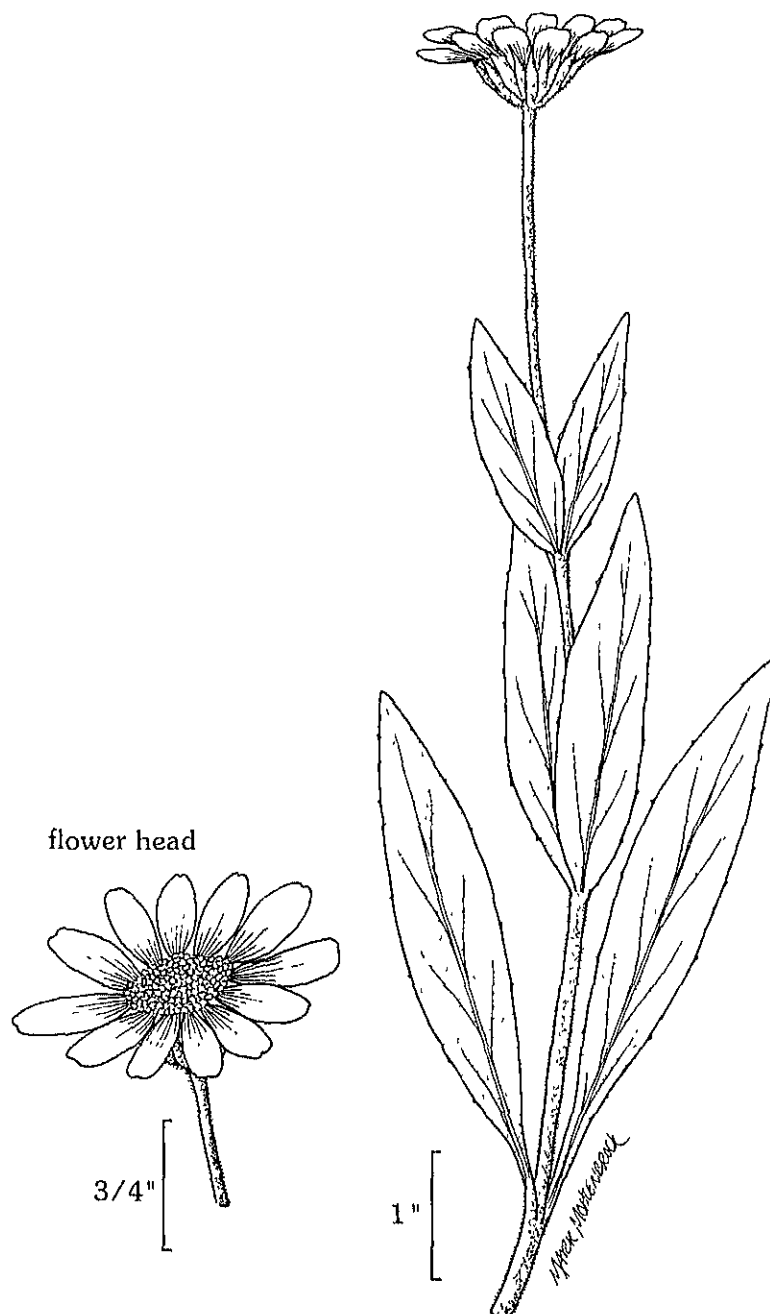
Hairy Arnica

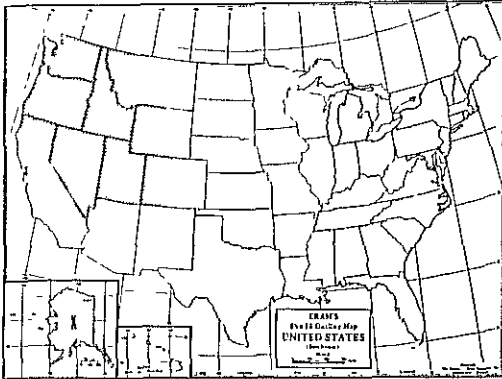
Arnica mollis Hook.

Family: Composite (Compositae)

June-September

Field Marks: This species is recognized by its 3-4 pairs of hairy, opposite leaves, and its few yellow flower heads up to 2 1/2 inches across.





Local Notes:



Habitat: Moist areas in the mountains, including spruce-pine forests.

Habit: Perennial herb with dark brown rhizomes.

Stems: Upright, unbranched, up to 2 feet tall, with short or long hairs, some of which may be glandular.

Leaves: Basal leaves oblanceolate to spatulate, borne on stalks; leaves on the stem in 3-4 opposite pairs, lanceolate to ovate, up to 3 inches long, sessile, usually rough-hairy, with or without teeth.

Flowers: Crowded together into a head, the head up to 2 1/2 inches across, some of the flowers yellow and ray-like surrounding a yellow disk; rays 12-18, 3/4-1 1/4 inches long; disk up to 1 1/2 inches across; each head subtended by several pointed, long-hairy bracts.

Sepals: 0.

Petals: Some united to form flat rays, others united to form short tubes.

Stamens: 5.

Pistils: Ovary inferior, hairy.

Fruits: Achenes up to 1/6 inch long, hairy, with a tuft of tawny-colored hairs at the tip.

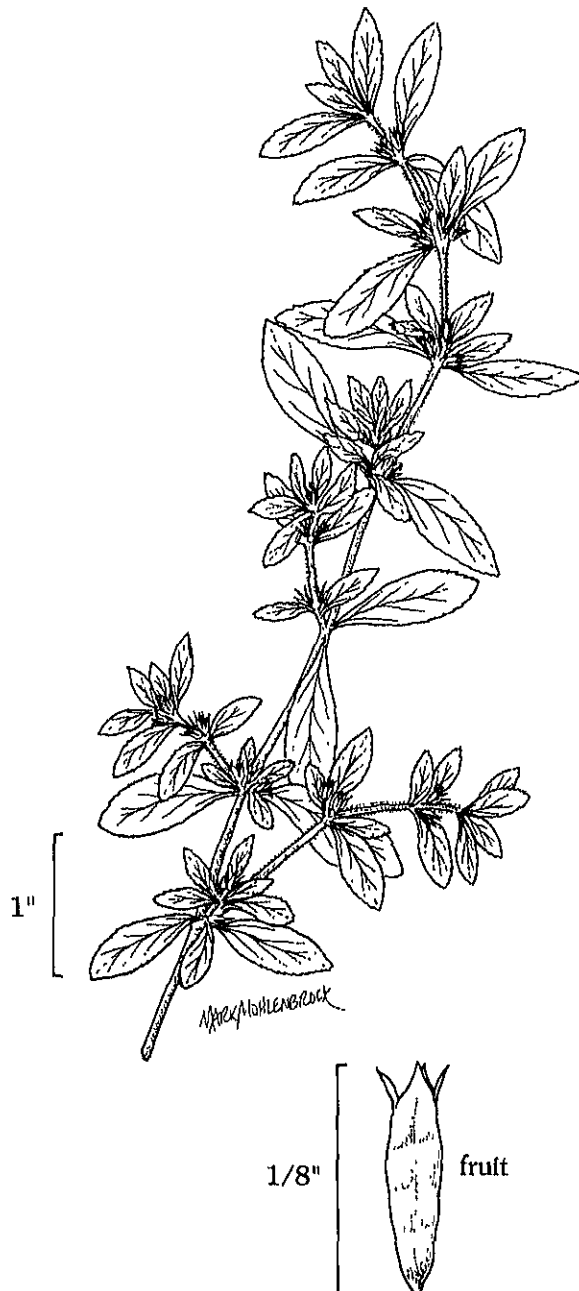
Texas Bergia

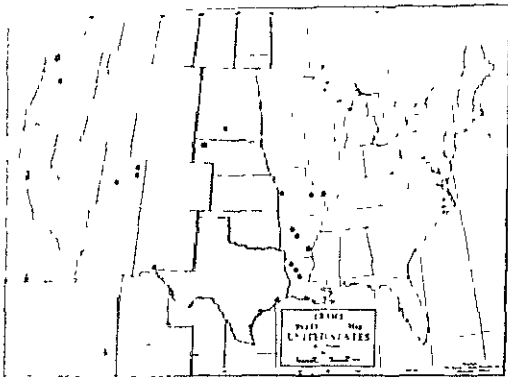
Bergia texana (Hook.) Seub. ex Walpers

Family: Waterwort (Elatinaceae)

July-October

Field Marks: This much branched, often sprawling annual is recognized by its glandular-hairy, opposite leaves and its tiny axillary flowers with 5 free white petals.





Local Notes:



Habitat: Mud flats, muddy shores of ponds, sandy lake beds.

Habit: Annual herb with a slender taproot

Stems: Spreading or ascending, much branched, up to 15 inches long, glandular-hairy, usually reddish

Leaves: Opposite, simple, elliptic to oblong, up to 1 1/2 inches long, up to 3/4 inch wide, pointed at the tip, tapering to the base, glandular-toothed, glandular-hairy.

Flowers: Solitary in the axils of the leaves, borne on short stalks.

Sepals: 5, free from each other, persistent on the fruit, green with a whitish margin, 1/8-1/6 inch long, with a thickened vein down the middle.

Petals: 5, free from each other, about as long as the sepals

Stamens: 5 or 10

Pistils: Ovary superior; styles 3 or 5

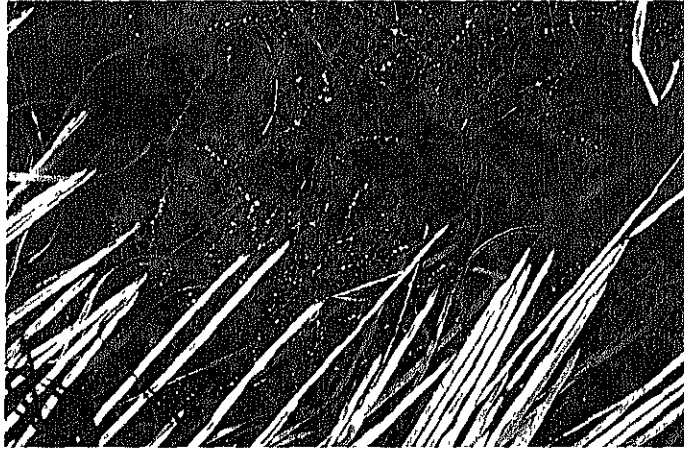
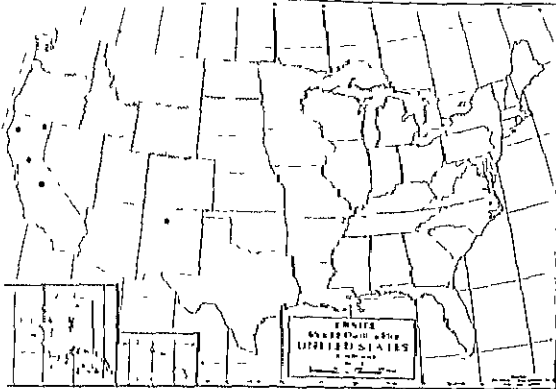
Fruits: Capsules spherical to ovoid, up to 1/8 inch long, containing minute curved seeds.

Notes: The seeds are eaten by waterfowl.

Callitriche hermaphrodita L.

June-August

A botanical illustration featuring a detailed drawing of a fruit and a branch of a plant. The fruit, located on the left, is a two-lobed capsule with a textured surface and a small stalk at the base. A vertical scale bar to its left is labeled "1/10\"". Below the fruit is the word "fruit". To the right is a larger illustration of a plant branch with several upright, needle-like leaves. A vertical scale bar next to the branch is labeled "1\"". The branch has a small root system at its base. The artist's signature, "Mark Mohlenbrock", is written in cursive at the bottom right of the branch illustration.



Local Notes:

Habitat: In streams and edges of ponds, usually in shallow water.

Habit: Perennial aquatic herb with slender rhizomes.

Stems: Slender, mat-forming, up to 15 inches long, rooting at the nodes, smooth

Leaves: Opposite, simple, the submersed and floating leaves uniformly linear-lanceolate, up to 1/2 inch long, up to 1/16 inch wide, pointed or rounded at the tip, smooth, without teeth, the bases not united.

Flowers: 1-3 in the axils of the leaves, the male and female flowers borne separately but on the same plant.

Sepals: 0.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior; styles 2.

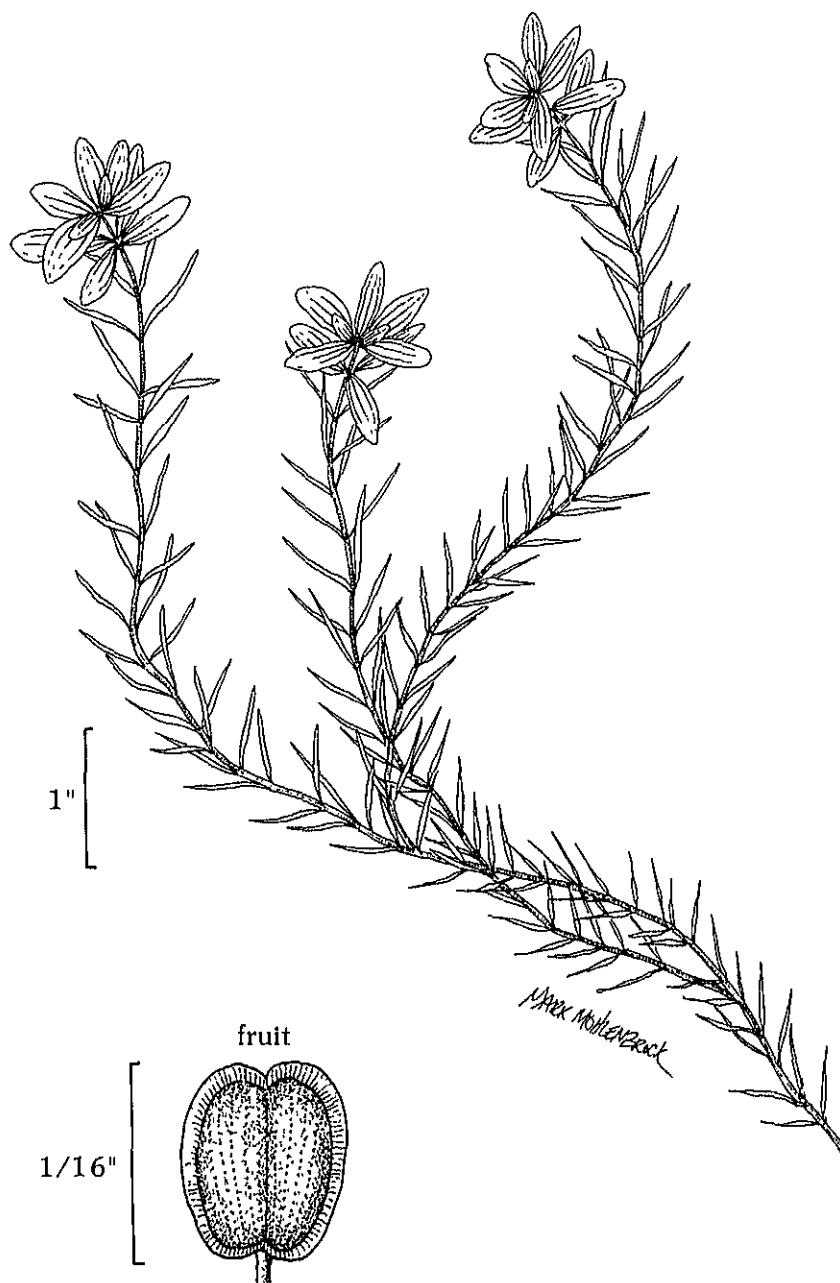
Fruits: Round in outline, 4-lobed, winged, notched at the tip, up to 1/10 inch long, smooth, with the recurved style persistent.

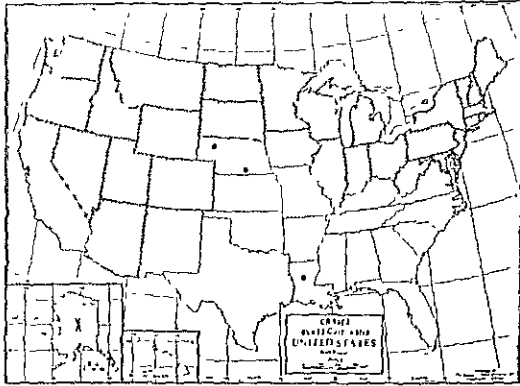
Notes: This species, when growing in mats, provides cover for fish.

Callitriche verna L.

May-August

Field Marks: This aquatic water-starwort differs from others in the genus by having linear-lanceolate submersed leaves and obovate to spatulate floating leaves, with the opposite leaves attached to each other at the base. In addition, the fruits are slightly longer than broad.





Local Notes:

Habitat: In streams, roadside ditches, and edges of ponds and lakes, usually in shallow water.

Habit: Perennial aquatic herb with slender rhizomes.

Stems: Slender, sometimes mat-forming, up to 12 inches long, rooting at the nodes, smooth.

Leaves: Opposite, simple, smooth, without teeth, united at the base, the submersed leaves linear to linear-lanceolate, up to 1/2 inch long, up to 1/3 inch wide, with 1 vein, the floating leaves obovate to spatulate, up to 1/2 inch long, up to 1/3 inch wide, with 3 veins.

Flowers: 1-3 in the axils of the leaves, the male and female flowers borne separately but on the same plant.

Sepals: 0.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior; styles 2.

Fruits: Ovoid, 4-lobed, winged, notched at the tip, up to 1/16 inch long, a little longer than wide, smooth, with a recurved persistent style.

Notes: This species may provide cover for fish.

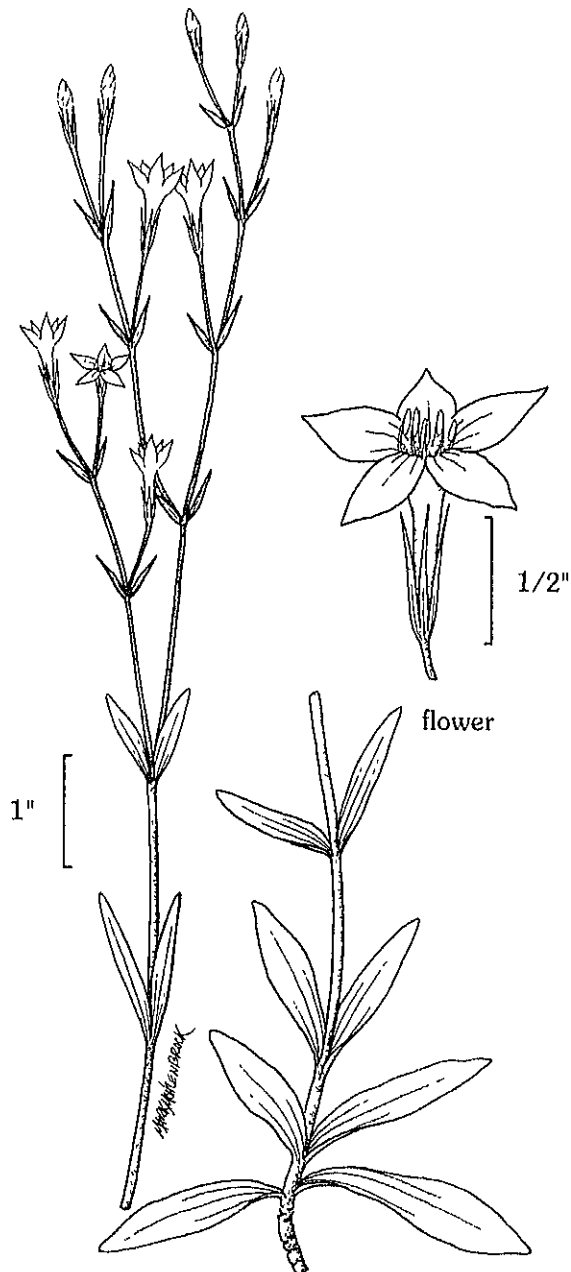
Arizona Centaury

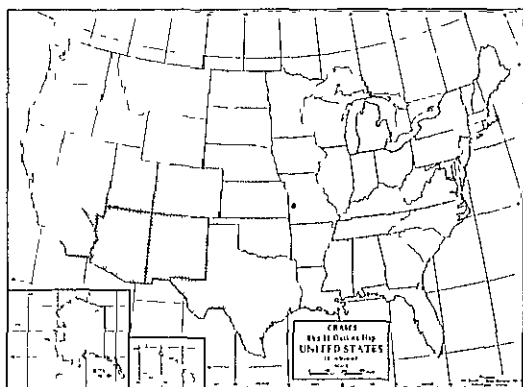
Centaurium calycosum (Buckley) Fernald

Family: Gentian (Gentianaceae)

June-September

Field Marks: The *Centaurium* differs from all others in having its pink petal-lobes more than 1/3 inch long.





Local Notes:

Habitat: Along streams, in marshes.

Habit: Annual or biennial herb with a thickened taproot.

Stems: Upright, unbranched or sparsely branched, up to 2 feet tall, smooth, 4-sided, narrowly winged

Leaves: Opposite, simple, elliptic to oblanceolate, up to 3 inches long, more or less pointed at the tip, tapering to the sessile base, without teeth, smooth.

Flowers: Few in a cyme, each flower on a slender stalk up to 1 1/2 inches long.

Sepals: Usually 5, united below, green, up to 1/2 inch long, with very slender teeth, smooth.

Petals: Usually 5, united below to form an elongated tube, pink, the tube up to 1/2 inch long or longer, with a yellow center, the lobes more than 1/3 inch long.

Stamens: Usually 5, exserted beyond the tube of the petals; anthers twisted after shedding pollen.

Pistils: Ovary superior.

Fruits: Capsules cylindrical, 1/3-1/2 inch long, smooth, containing many small, nearly spherical, dark brown seeds.

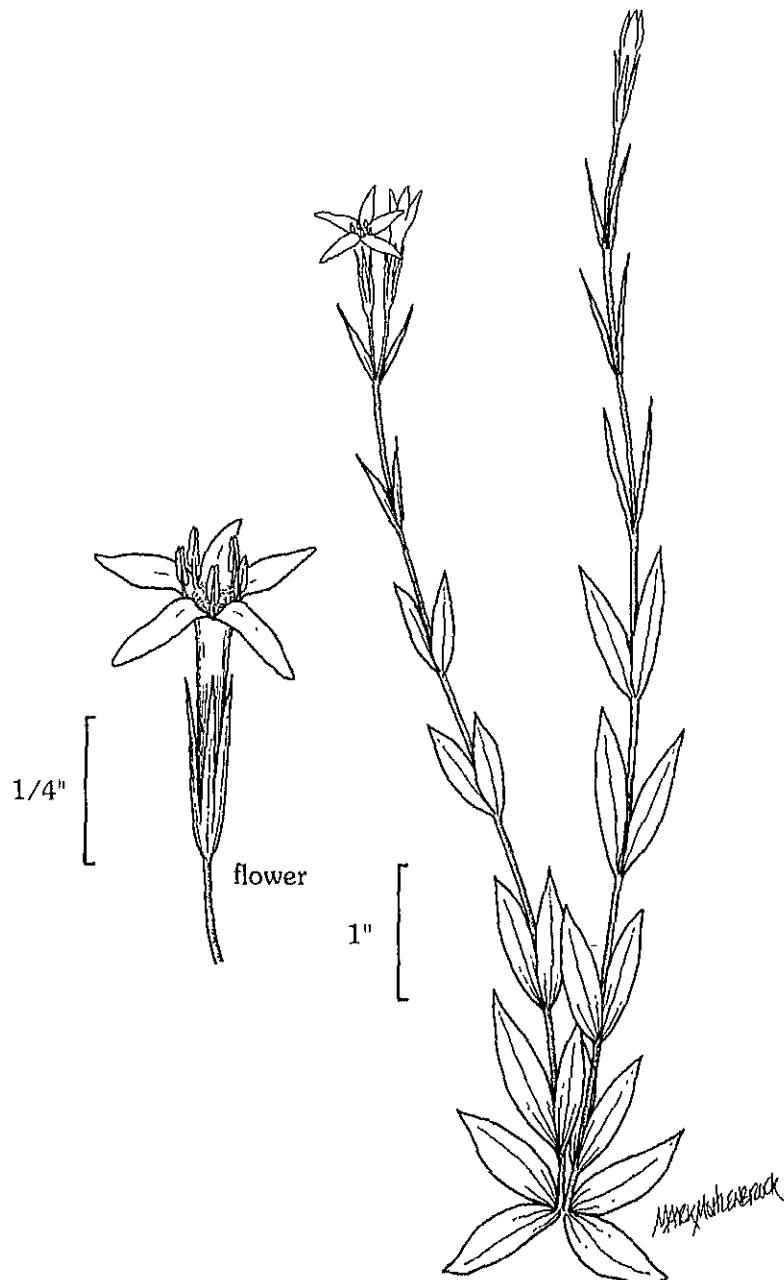
Tall Centaury

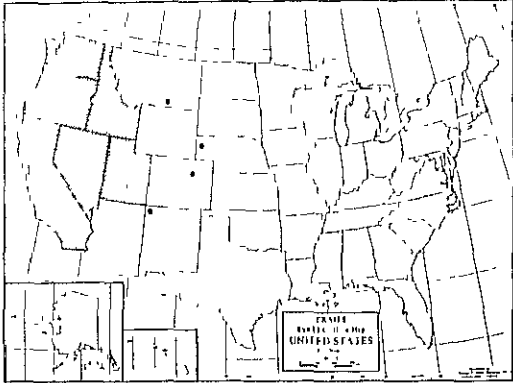
Centaureum exaltatum (Griseb.) W. Wight ex Piper

Family: Gentian (Gentianaceae)

June-August

Field Marks: The flowers in the genus *Centaureum* are pink or rose in color and form a slender tube below the 5 petal-lobes. The anthers become twisted after releasing their pollen.





Local Notes:

The petal-lobes are not more than $\frac{1}{3}$ inch long, and all the flowers are borne on stalks.

Habitat: Along streams, in marshes, around hot springs, sometimes in alkaline soils.

Habit: Annual herb with fibrous roots.

Stems: Upright, unbranched, slender, up to $1 \frac{1}{4}$ feet tall, smooth, often 4-sided and even narrowly winged

Leaves: Opposite, simple, linear to lanceolate, pointed at the tip, tapering to the sessile base, up to 2 inches long, up to $\frac{3}{4}$ inch wide, without teeth, smooth.

Flowers: Few in a cyme, each flower on a slender stalk 1-3 inches long.

Sepals: 4 or 5, united below, green, up to $\frac{1}{2}$ inch long, with very slender teeth, smooth.

Petals: 4 or 5, united below to form an elongated tube, pink or rose, the tube up to $\frac{1}{2}$ inch long and with a greenish or yellowish center, the lobes up to $\frac{1}{3}$ inch long.

Stamens: 4 or 5, exerted beyond the tube of the petals; anthers twisted after shedding the pollen.

Pistils: Ovary superior.

Fruits: Capsules cylindrical, $\frac{1}{2}$ - $\frac{3}{4}$ inch long, smooth, containing small, ovoid, dark brown seeds.

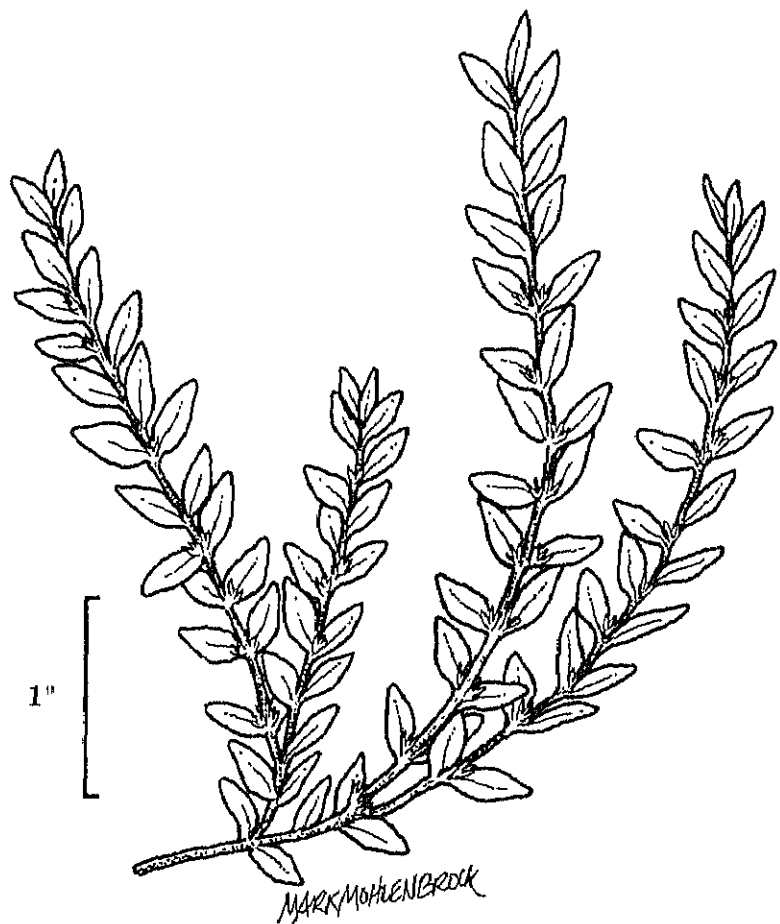
Chaffweed

Centunculus minimus L.

Family: Primrose (Primulaceae)

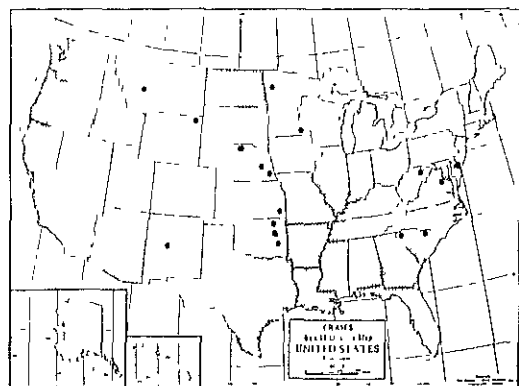
April-Ju

Field Marks: This dwarf annual has rotate pink flowers with usually 4 petals that are shorter than the sepals



flower

1/2



Local Notes:



Habitat: Most moist areas, including vernal pools.

Habit: Annual with fibrous roots.

Stems: Ascending, branched or unbranched, up to 4 inches tall, smooth.

Leaves: Simple, alternate or opposite above, opposite near the base of the stem, spatulate to obovate, rounded or pointed at the tip, tapering to the base, without teeth, smooth

Flowers: Very tiny and solitary in the axils of the leaves, rotate.

Sepals: Usually 4, green, united below, up to 1/6 inch long.

Petals: Usually 4, pink, united at the base, a little shorter than the sepals

Stamens: Usually 4.

Pistils: Ovary superior, smooth.

Fruits: Capsules spherical, smooth.

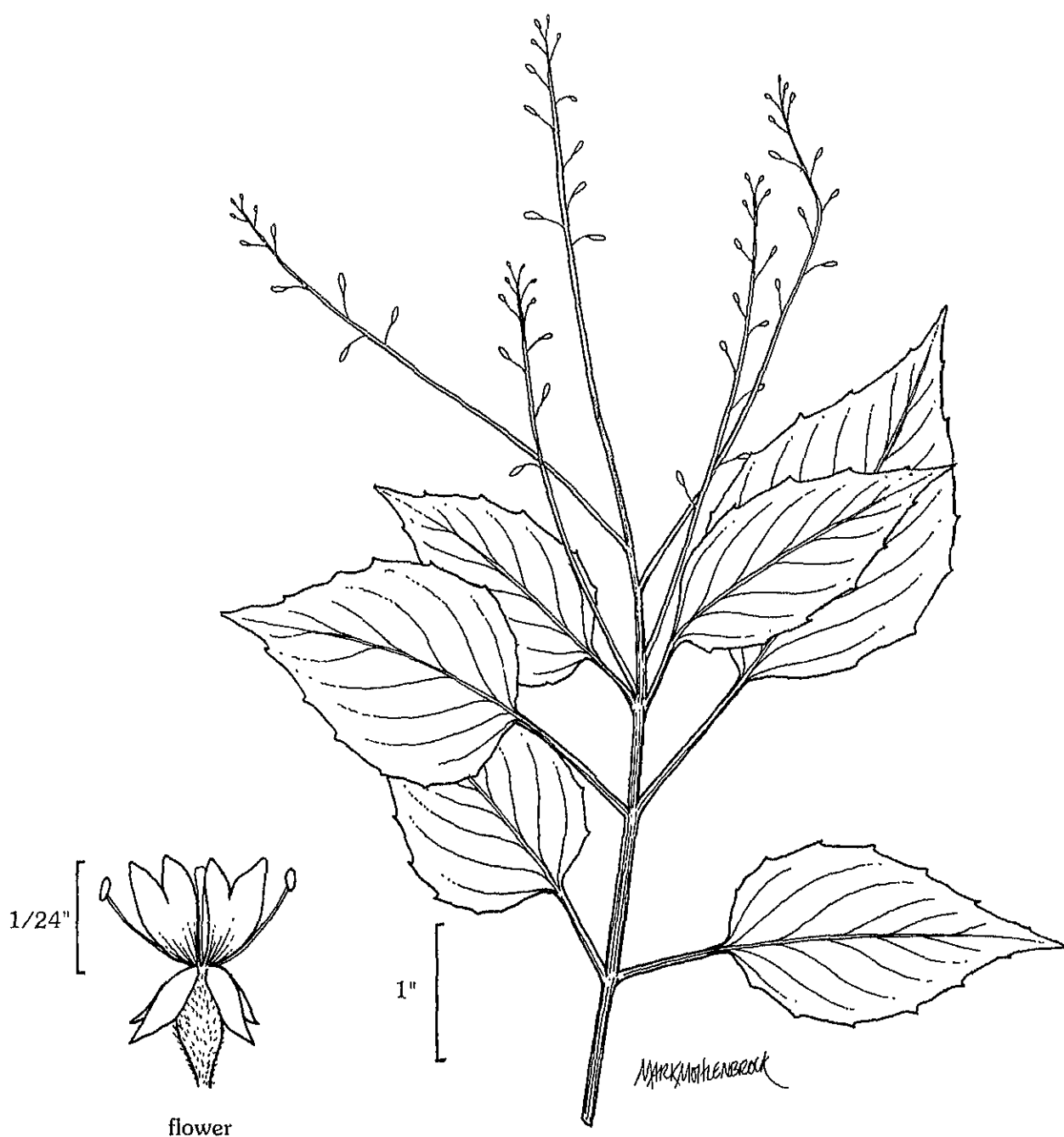
Small Enchanter's Nightshade

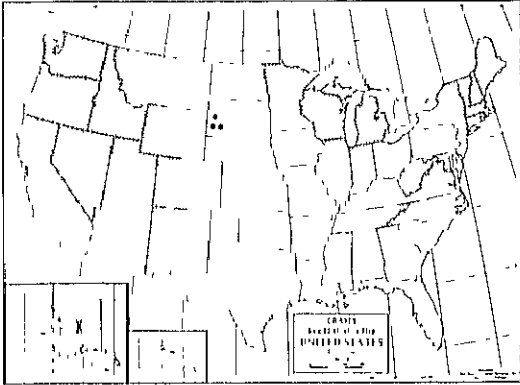
Circaea alpina L.

Family: Evening-primrose (Onagraceae)

June-August

Field Marks: This species is recognized by its flowers which have 2 sepals, 2 notched white petals, 2 stamens, and an inferior ovary. The small capsule is covered with hooked hairs.





Local Notes:

Habitat: Moist woods.

Habit: Perennial herb from a tuberous rootstock.

Stems: Upright, unbranched, up to 2 feet tall, usually with a few appressed hairs.

Leaves: Opposite, simple, ovate, up to 3 inches long, pointed at the tip, rounded or heart-shaped at the base, with or without teeth, smooth or sparsely hairy; leaf stalks 1-1 1/2 inches long.

Flowers: Few in a raceme, without bracts.

Sepals: 2, green, free from each other, about 1/24 inch long.

Petals: 2, white, free from each other, notched, about 1/24 inch long.

Stamens: 2.

Pistils: Ovary superior.

Fruits: Capsules obovoid, up to 1/12 inch long, covered with hooked hairs.

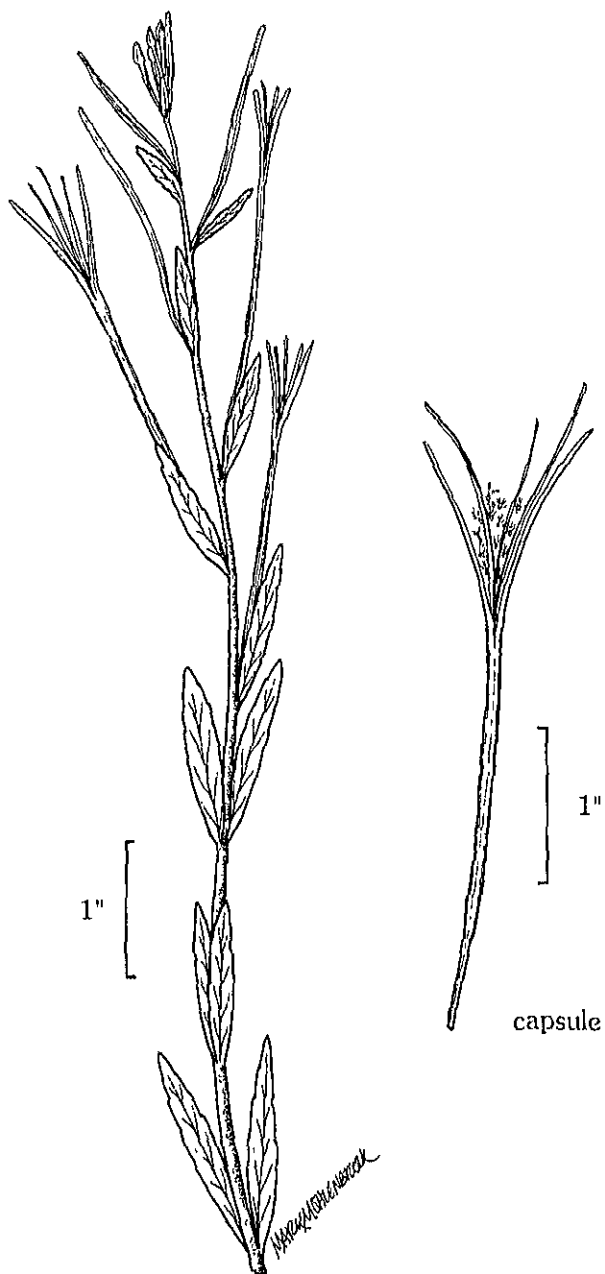
Glaucous Willow-herb

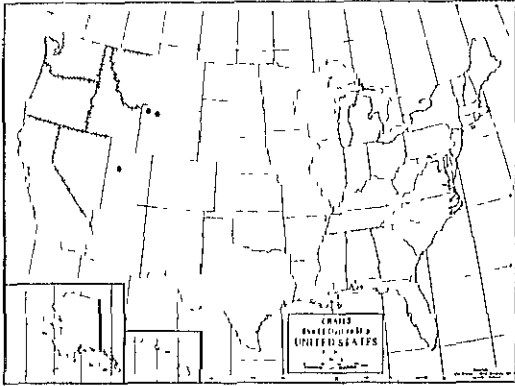
Epilobium glaberrimum Barbey

Family: Evening-primrose (Onagraceae)

July-August

Field Marks: This species is recognized by its glaucous stems and leaves and by its scaly rootstocks.





Local Notes:

Habitat: Along streams, moist woods.

Habit: Perennial herb with scaly rootstocks.

Stems: Upright, unbranched, slender, up to 2 feet tall, smooth or rarely with glandular hairs, glaucous, often purplish.

Leaves: Opposite, simple, ascending, oblong to lanceolate, up to 2 inches long, more or less rounded at the tip, tapering to the sessile base, smooth, glaucous, with or without minute teeth; flower stalks very short.

Flowers: Several in a terminal cluster, usually upright, sometimes drooping.

Sepals: 4, green, free from each other, about 1/12 inch long.

Petals: 4, purple to white, free from each other, usually slightly notched at the tip, 1/6-1/3 inch long.

Stamens: 8.

Pistils: Ovary inferior.

Fruits: Capsules ellipsoid, slender, 2-3 inches long; seeds about 1/24 inch long, covered with minute warts, bearing a tuft of whitish hairs.

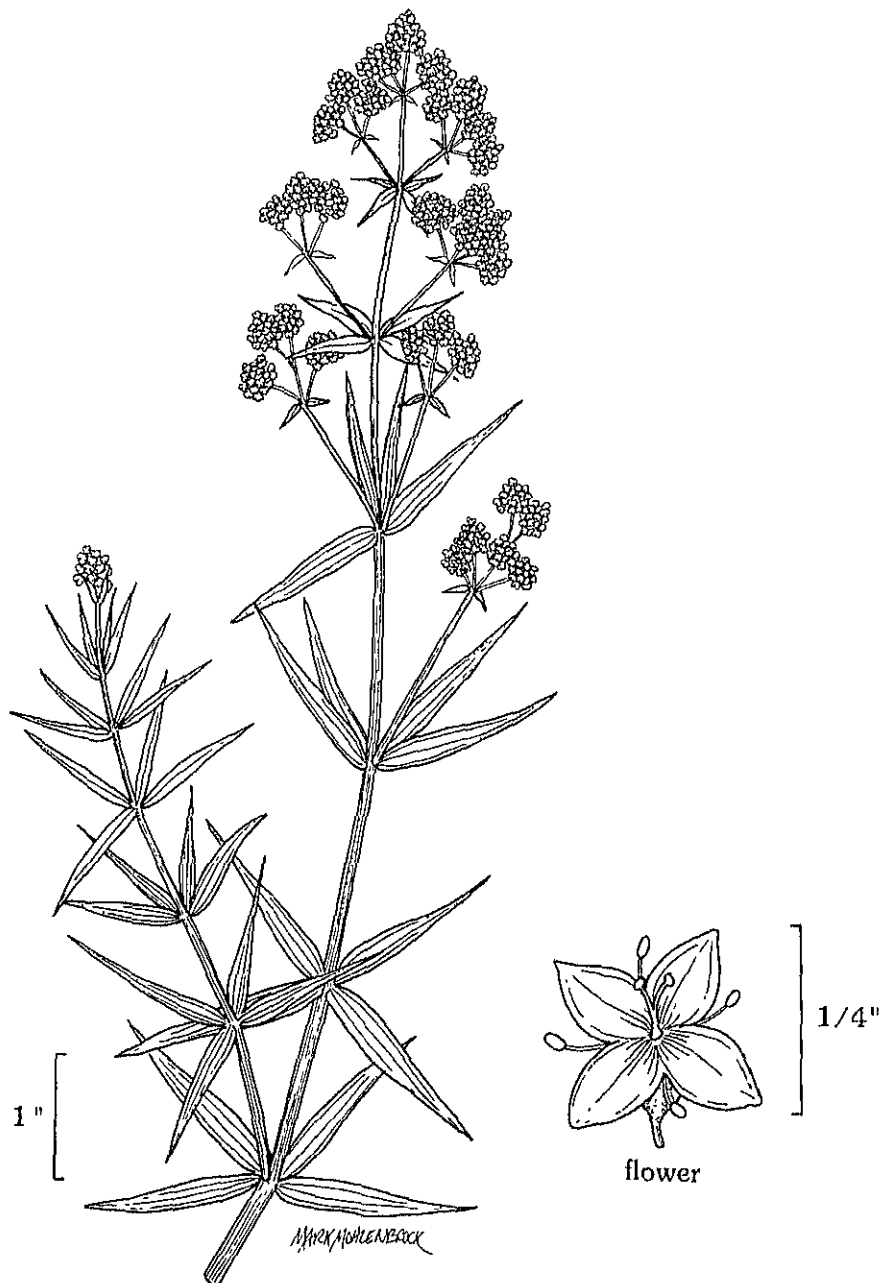
Northern Bedstraw

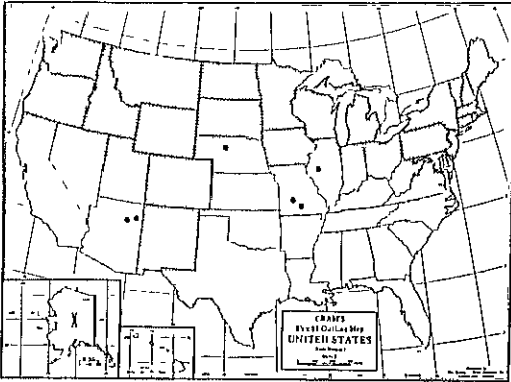
Galium boreale L.

Family: Madder (Rubiaceae)

June-August

Field Marks: This bedstraw has an upright stem, leaves in whorls of 4, and white flowers in a rather showy, terminal panicle





Local Notes:



Habitat: Wet meadows, dry slopes.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, branched, up to 2 feet tall, usually hairy at the nodes, smooth or slightly rough to the touch elsewhere.

Leaves: In whorls of 4, simple, linear-lanceolate to lanceolate, up to 2 inches long, up to 1/4 inch wide, rounded or pointed at the tip, tapering to the sessile base, 3-veined, smooth or slightly rough to the touch, the edge of the leaf ciliate.

Flowers: Many borne in a compact, terminal panicle, rather showy.

Sepals: Absent or nearly so.

Petals: 4, white, united below, 1/6 to 1/4 inch across.

Stamens: 4.

Pistils: Ovary inferior, 2-lobed; styles 2.

Fruits: 2-lobed, up to 1/10 inch in diameter, smooth or minutely hairy.

Notes: There is considerable variation in the amount of hairiness on the stem, leaves, and fruits. The fruits may be eaten by small birds and small mammals.

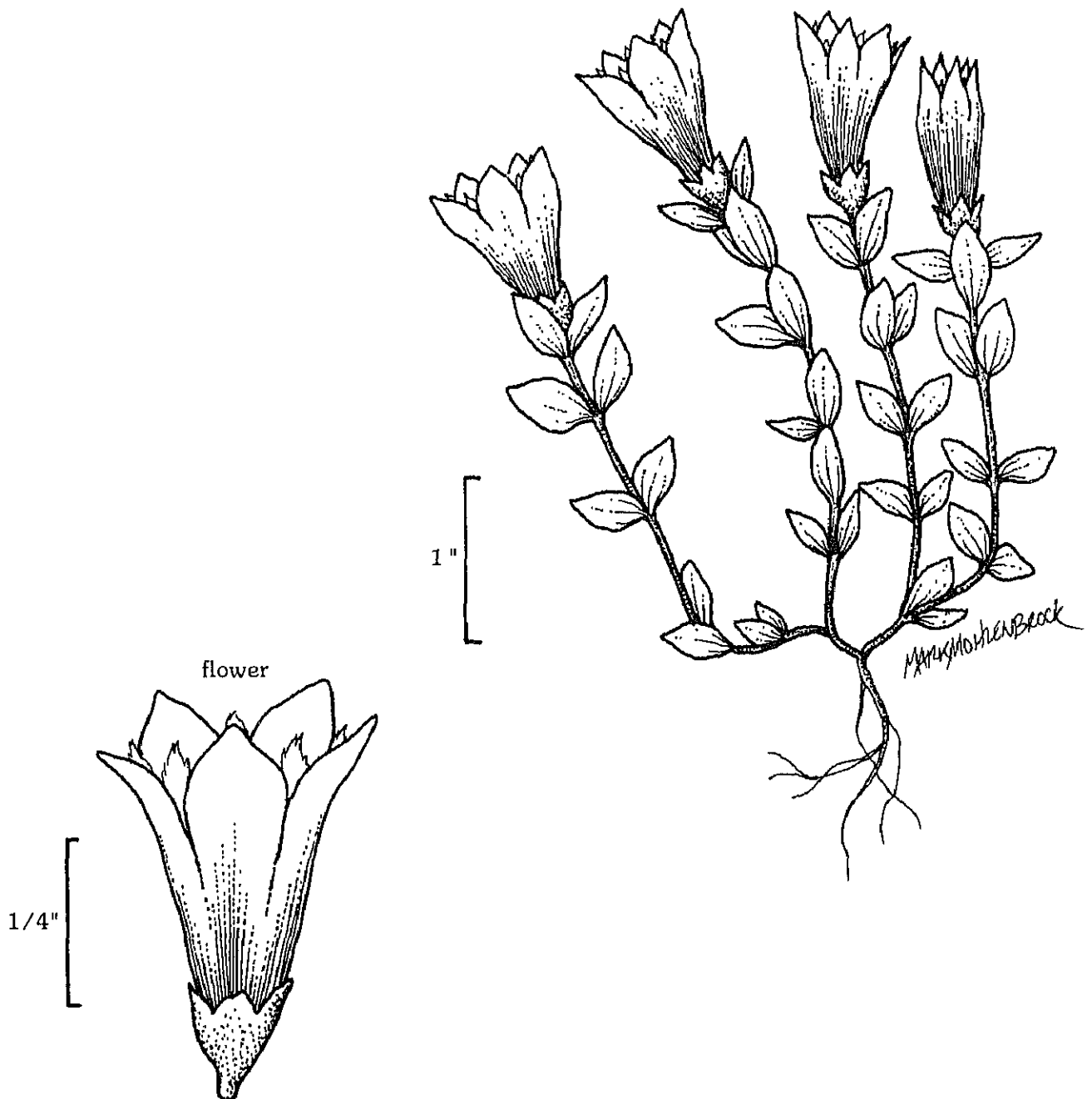
Rainier Pleated Gentian

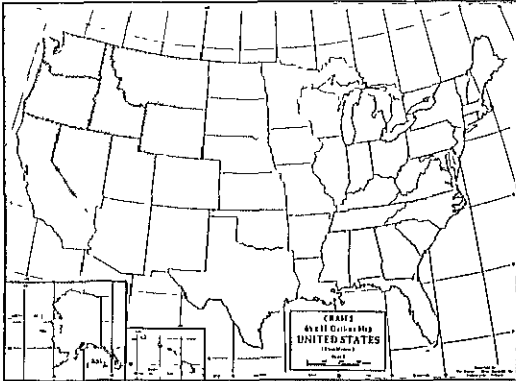
Gentiana calycosa Griseb.

Family: Gentian (Gentianaceae)

July-September

Field Marks: The distinguishing features of this gentian are its perennial habit, its tube of the sepals $\frac{1}{4}$ - $\frac{1}{2}$ inch long, and its blue petals with tiny yellow dots over the surface





Local Notes:

Habitat: Wet meadows, along streams, mostly in the mountains.

Habit: Perennial herb with a thick rootstock.

Stems: Upright, unbranched, up to 12 inches tall, smooth.

Leaves: Opposite, simple, ovate to suborbicular, up to 2 inches long, pointed or rounded at the tip, rounded at the base, smooth, without teeth.

Flowers: Showy, 1-3 in a cluster, subtended by lanceolate to ovate bracts.

Sepals: 5, green, united below to form a tube, the tube 1/4-1/2 inch long, the lobes 1/8-1/3 inch long.

Petals: 5, deep blue, united to form a bell-shaped tube, the tube to 1 1/2 inches long, the lobes 1/3-1/2 inch long, the surface covered with tiny yellow dots.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior, smooth; stigmas 2.

Fruits: Capsules narrowly ellipsoid, 3/4-1 inch long, with a stalk at the base; seeds numerous, narrowly winged, about 1/10 inch long.

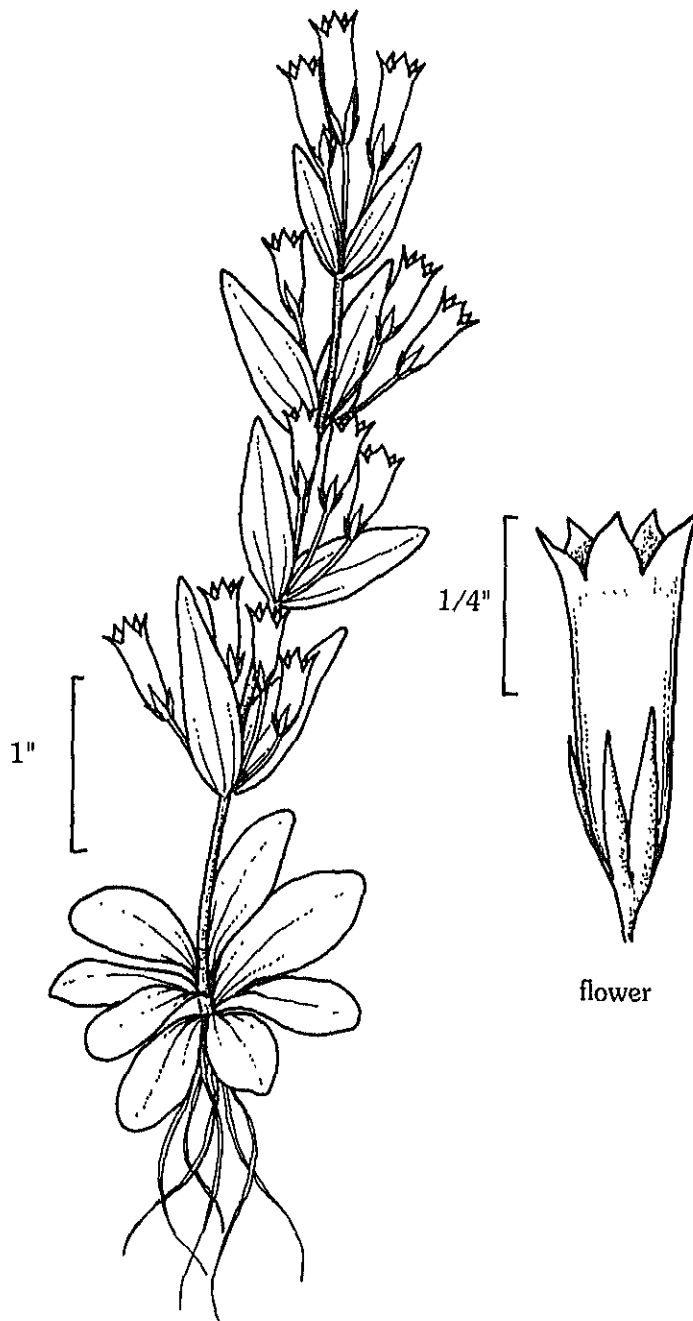
Northern Gentian

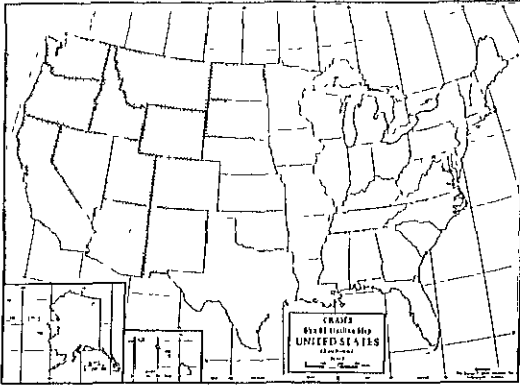
Gentianella amarella (L.) Boerner

Family: Gentian (Gentianaceae)

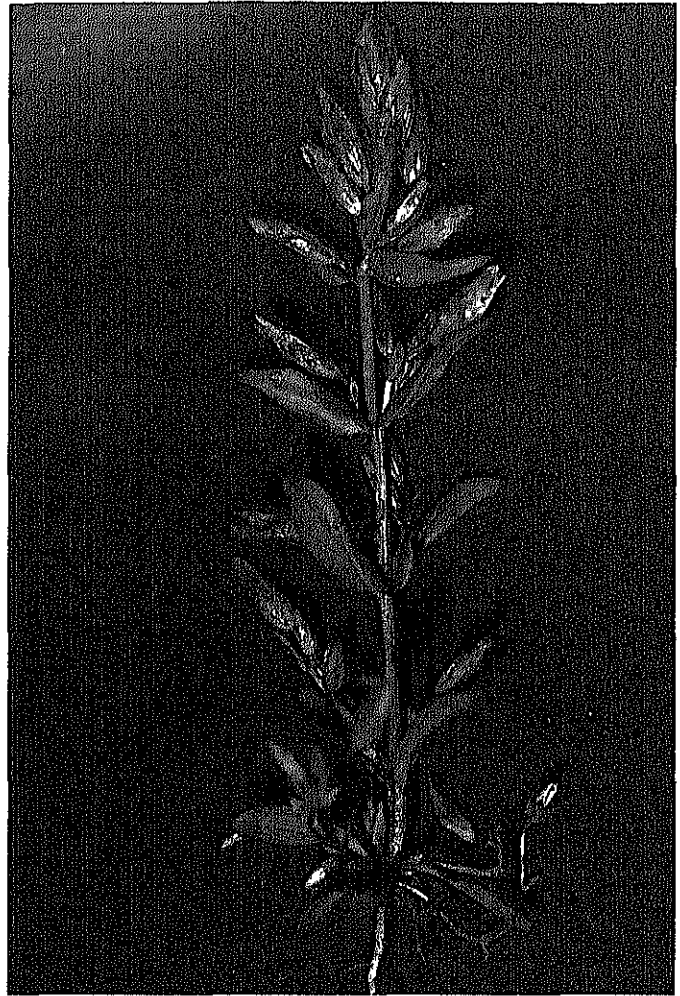
June-September

Field Marks: *Gentianella* differs from other genera of the Gentianaceae by lacking fringed petals, by lacking folds between the petals, and by having the petals united for more than 2/3 their length.





Local Notes:



Habitat: Wet meadows in the mountains.

Habit: Annual herb with fibrous roots.

Stems: Upright, branched, up to 1 1/2 feet tall, smooth.

Leaves: Opposite, simple, smooth, without teeth, the basal leaves spatulate, pointed or rounded at the tip, tapering to the base, up to 2 inches long, the cauline leaves ovate to lanceolate, more or less pointed at the tip, up to 1 1/2 inches long.

Flowers: 2-10 in the axils of the leaves and also terminal; flower stalks slender, up to 2 inches long, smooth.

Sepals: Usually 5, united for more than 1/2 their length, green, up to 1/4 inch long.

Petals: Usually 4, united for more than 2/3 their length, usually blue or purple, nearly an inch long.

Stamens: 5.

Pistils: Ovary superior; stigmas 2.

Fruits: Capsules cylindrical, up to 1/2 inch long; seeds minute, smooth.

Notes: In the past this species has been known as *Gentiana heterosepala*, *Gentiana amarella*, or *Gentiana acuta*.

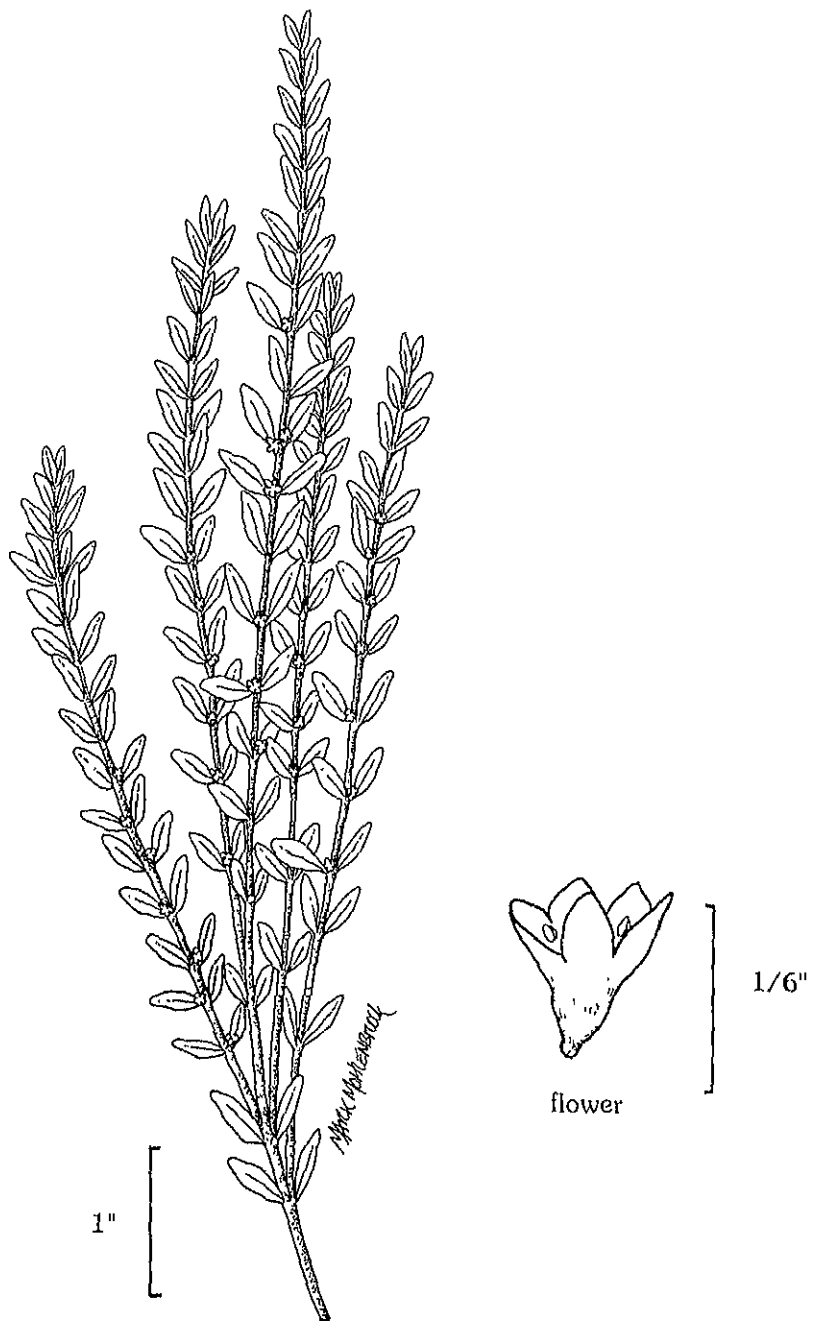
Sea-milkwort

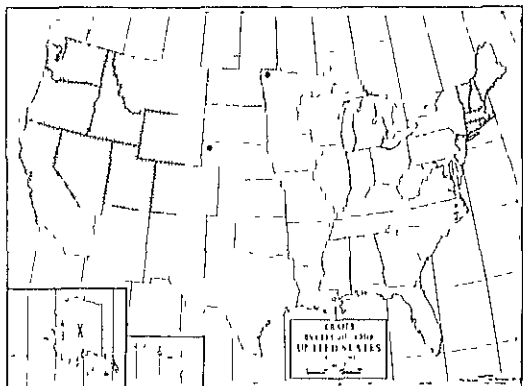
Glaux maritima L.

Family: Primrose (Primulaceae)

May-July

Field Marks: This small, succulent perennial is distinguished by its solitary, axillary, sessile flowers with 5 petal-like sepals and no petals





Local Notes:



Habitat: Salt marshes

Habit: Perennial herb with slender rootstocks.

Stems: Upright, branched or unbranched, succulent, up to 8 inches tall, smooth.

Leaves: Opposite, simple, fleshy, linear to oblong, up to 1/2 inch long, pointed or rounded at the tip, tapering to the sessile base, smooth, without teeth.

Flowers: Solitary in the axils of the leaves, sessile.

Sepals: 5, united below, lavender to white, up to 1/6 inch long

Petals: 0.

Stamens: 5.

Pistils: Ovary superior, smooth

Fruits: Capsules ovoid to nearly spherical, up to 1/8 inch long, smooth, with several flattened, brown, pitted seeds

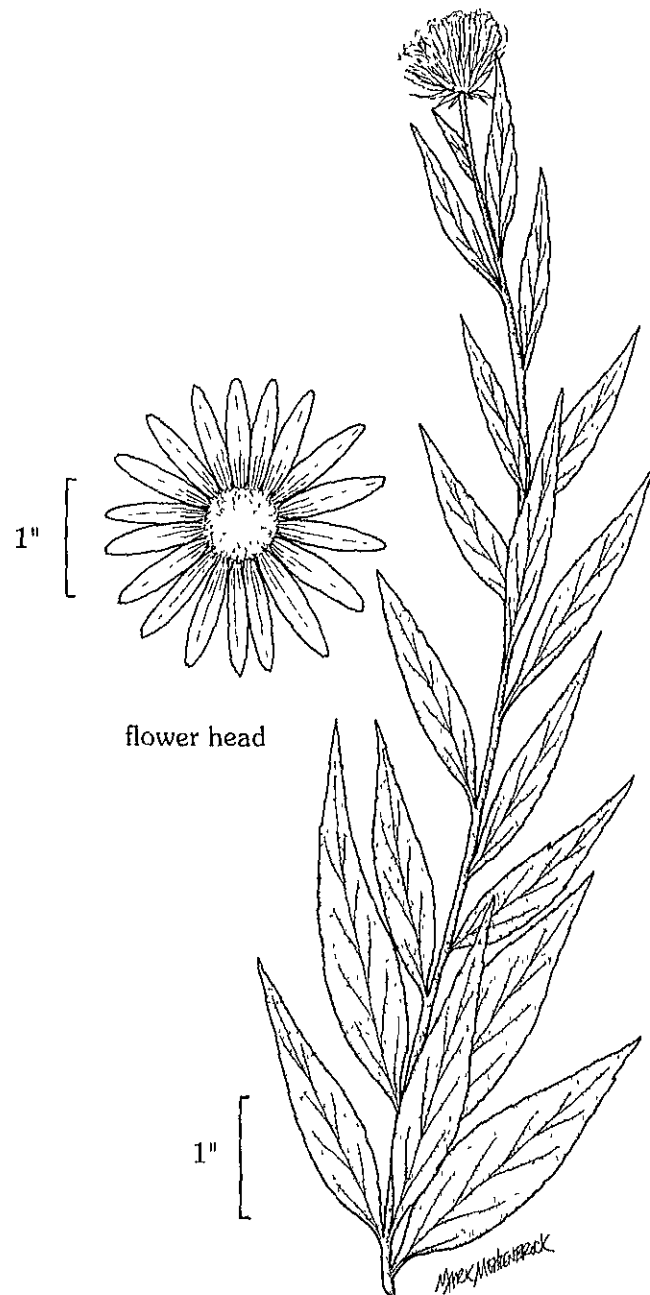
Nuttall's Sunflower

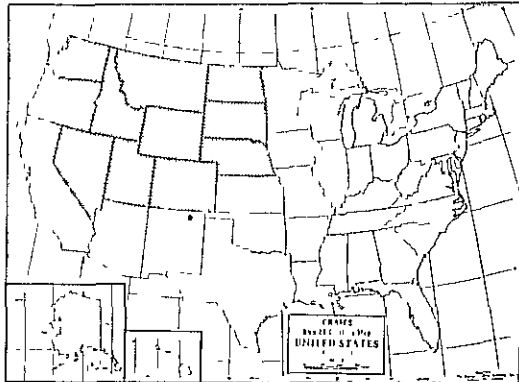
Helianthus nuttallii Torr. & Gray

Family: Composite (Compositae)

July-November

Field Marks: This tall sunflower has yellow flower heads up to 2 1/2 inches wide. The bracts that subtend the flower heads may be as long as 1 inch.





Local Notes:



Habitat: Moist or dry meadows.

Habit: Perennial herb with thickened roots and short rhizomes.

Stems: Upright, branched or unbranched, up to 12 feet tall, smooth or less commonly hairy, more or less glaucous.

Leaves: All opposite, or the uppermost alternate, simple, narrowly lanceolate to lanceolate, up to 6 inches long, up to 1 1/2 inches wide, pointed at the tip, tapering to the sessile or short-stalked base, with or without teeth, short-hairy and rough to the touch.

Flowers: Many crowded together into heads up to 2 1/2 inches across, each head consisting of 12-20 yellow rays and a central disk of yellow-tubular flowers; bracts surrounding the heads elongated, pointed at the tip, rough-hairy, up to 1 inch long.

Sepals: 0.

Petals: 5, yellow, some of them united to form rays, others united to form tubular flowers that comprise the central disk.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes ellipsoid, up to 1/6 inch long, smooth.

Notes: The achenes are eaten by birds.

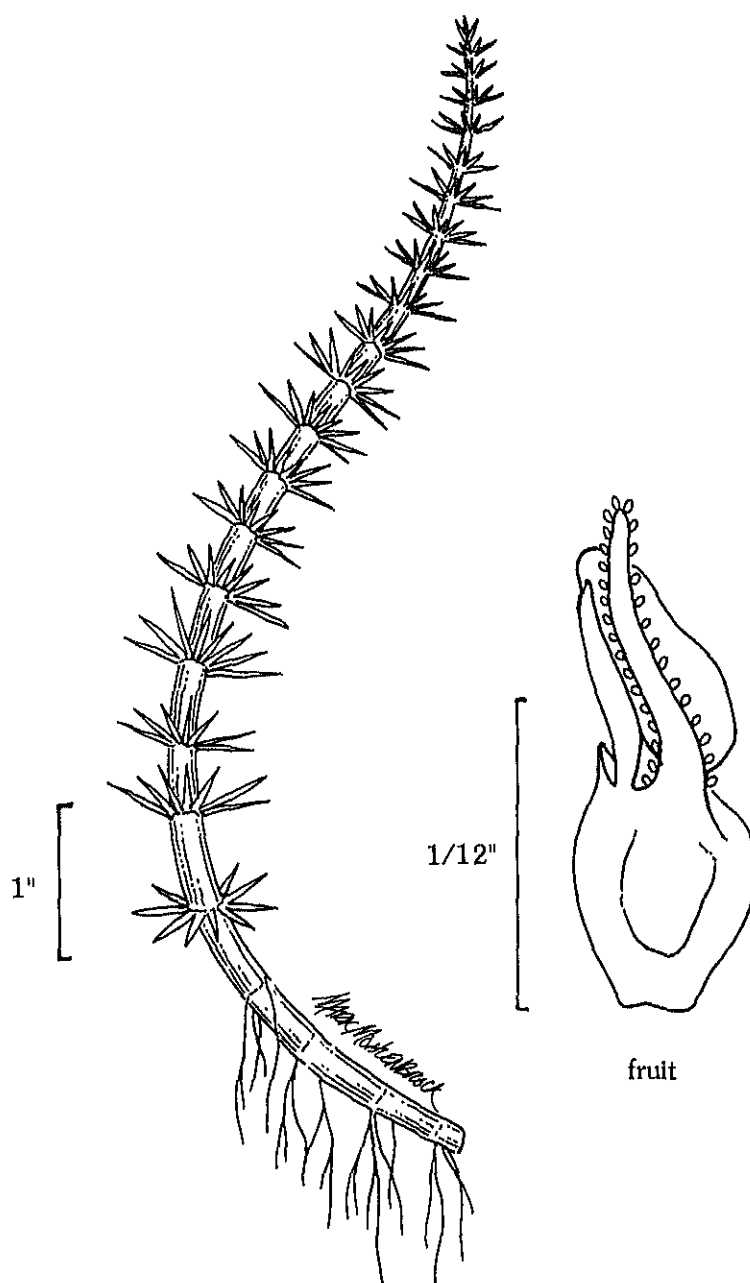
Common Mare's-tail

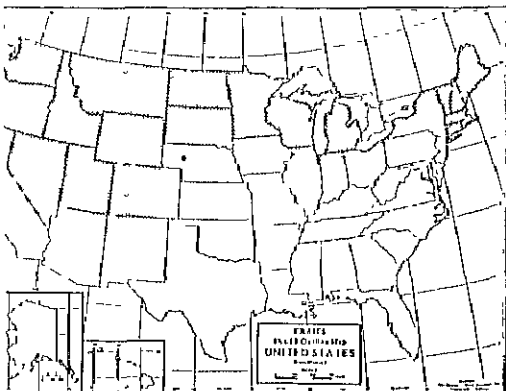
Hippuris vulgaris L.

Family: Mare's-tail (Hippuridaceae)

June-August

Field Marks: This species is readily distinguished by its whorls of toothless, undivided leaves and single stamen per flower.





cal Notes:



Habitat: In and around lakes, ditches, sloughs, ponds, and streams.

Habit: Submerged or emerged perennial from slender, creeping rhizomes.

Stems: Upright, unbranched, up to 2 feet long, smooth.

Leaves: 6-12 in whorls, the whorls $\frac{1}{3}$ - $\frac{1}{2}$ inch apart on the stem, each leaf linear, sessile, up to 1 $\frac{1}{2}$ inches long, without teeth or divisions, smooth; submerged leaves sometimes reduced to short scales.

Flowers: Solitary in the axils of emerged leaves.

Sepals: Very tiny, green, united to the ovary.

Petals: 0.

Stamens: 1.

Pistils: Ovary inferior.

Fruits: Up to $\frac{1}{8}$ inch long, nut-like, ellipsoid, hard, not dehiscent, 1-seeded.

Notes: Leaves that are in the water are usually very soft and weak, resembling those of *Elodea*, the waterweed, but leaves of *Elodea* are rarely in whorls of more than 3. The fruits are eaten by waterfowl.

Bog St. John's-wort

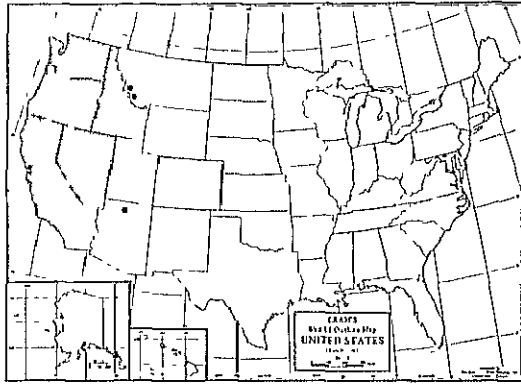
Hypericum anagalloides Cham. & Schlecht.

Family: St. John's-wort (Guttiferae)

June-August

Field Marks: This St. John's-wort usually grows in mats and has yellow flowers $\frac{1}{4}$ - $\frac{1}{3}$ inch across. The small leaves are rounded at the tip and sometimes clasp the stem.





Local Notes:



Habitat: Marshes, wet meadows, around springs.

Habit: Annual or sometimes perennial herb, rooting at the nodes, often forming mats.

Stems: Sprawling or upright, slender, usually unbranched, up to 1 1/4 feet tall, smooth.

Leaves: Opposite, simple, elliptic to ovate, rounded at the tip, tapering or rounded at the base, on short stalks or sometimes clasping the stem, smooth, with 5 or 7 veins, without teeth.

Flowers: 1-few in cymes.

Sepals: 5, green, free from each other, lanceolate, up to 1/6 inch long, unequal in size.

Petals: 5, yellow, free from each other, oval, up to 1/6 inch long, not dotted.

Stamens: 15-20.

Pistils: Ovary superior; styles 5, very short.

Fruits: Capsules ovoid, up to 1/6 inch long, smooth, containing many seeds.

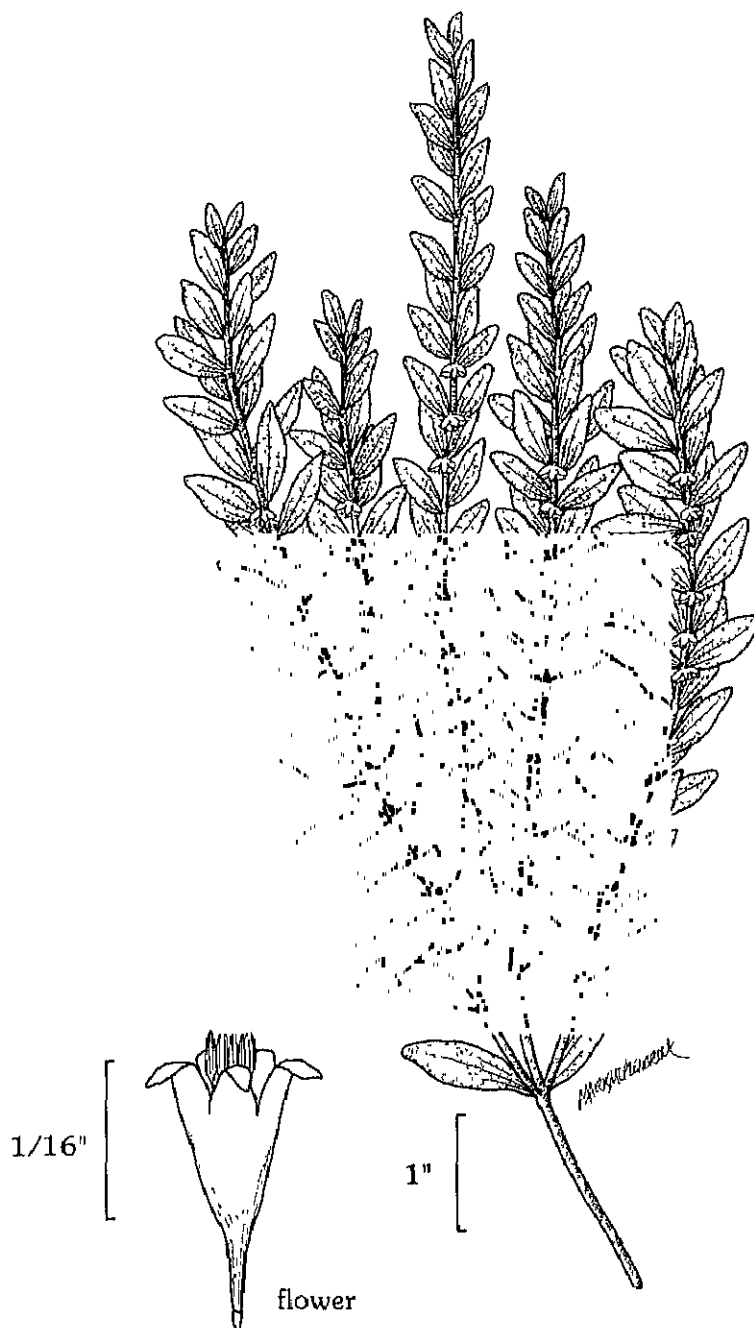
Small-flower Sumpweed

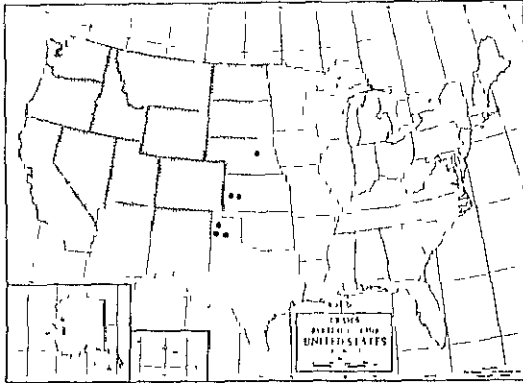
Iva axillaris Pursh

Family: Composite (Compositae)

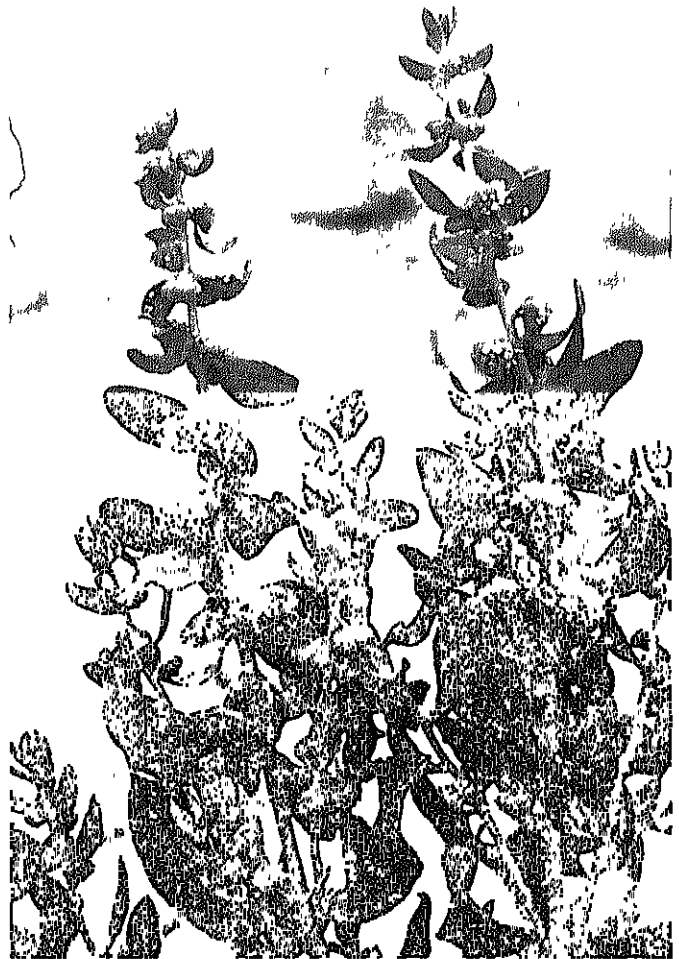
May-September

Field Marks: The genus *Iva* consists of species with inconspicuous heads comprised only of greenish white, short, tubular flowers. The bracts are united at the base to form a cup.





Local Notes:



Habitat: Salt marshes, alkaline flats.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, or lying flat before becoming upright, branched or unbranched, up to 2 feet tall, smooth or hairy.

Leaves: Lower leaves opposite, upper leaves alternate, all simple, obovate to oblanceolate, up to 2 inches long, up to 3/4 inch wide, rounded or somewhat pointed at the tip, tapering to the nearly sessile or sessile base, without teeth, 3-veined, usually hairy.

Flowers: Several crowded into nodding heads, with a single head in the axils of the leaves, each head up to 1/4 inch across, consisting only of greenish white tubular flowers; bracts subtending each head united to form a cup.

Sepals: 0

Petals: 5, greenish white, united to form a short, tubular flower.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes obovoid, smooth although sometimes glandular, up to 1/8 inch long.

Notes: The outer flowers of the disk are only female, while the inner flowers have both stamens and pistils

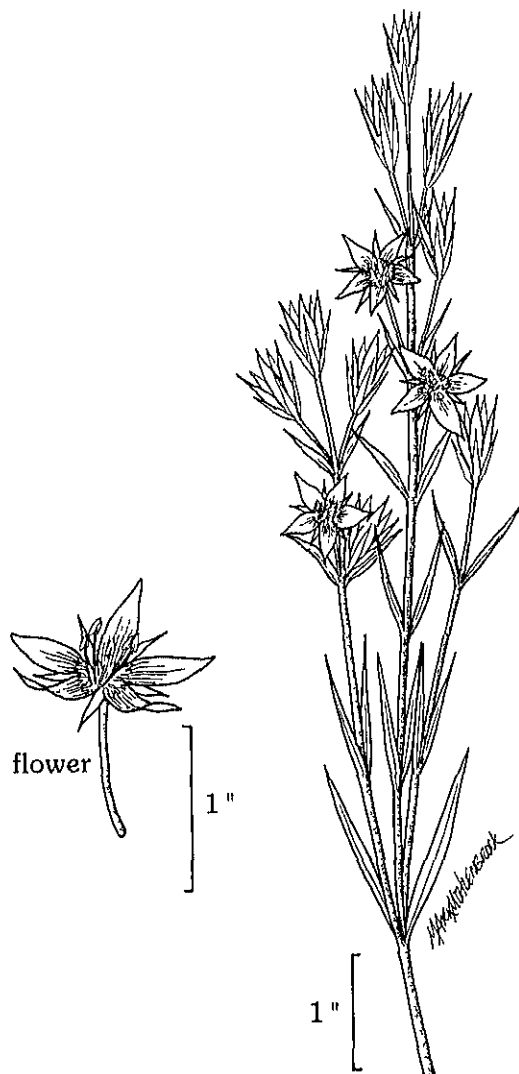
Marsh Felwort

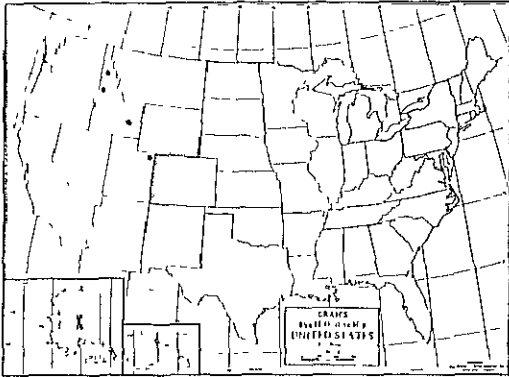
Lomatogonium rotatum (L.) Fr. ex Fernald

Family: Gentian (Gentianaceae)

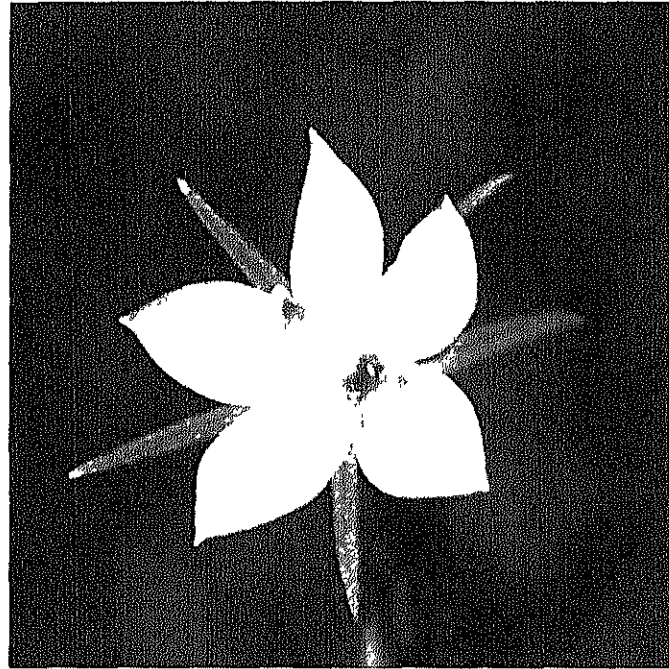
August-September

Field Marks: This species has 5 united blue petals that form a rotate flower, rather than a tubular one. The stigmas are attached to the sides of the ovary.





Local Notes:



Habitat: Wet meadows, bogs, often in salty habitats.

Habit: Annual herb with fibrous roots.

Stems: Upright, usually unbranched, up to 10 inches tall, smooth.

Leaves: Opposite, simple, those on the lower part of the stem oblong to oblanceolate, those on the upper part of the stem linear, up to 1 1/2 inches long, smooth, without teeth.

Flowers: Borne singly in the axils of the upper leaves, on slender, smooth stalks.

Sepals: 4-5, green, united only at the base, smooth, 1/3-1/2 inch long.

Petals: 4-5, blue or rarely white, united near the base but not forming a tube, pointed at the tip, 1/4-3/4 inch long.

Stamens: 4-5, attached to the base of the petals.

Pistils: Ovary superior, smooth; stigmas attached to the sides of the ovary.

Fruits: Capsules ellipsoid to oblongoid, smooth, seeds numerous.

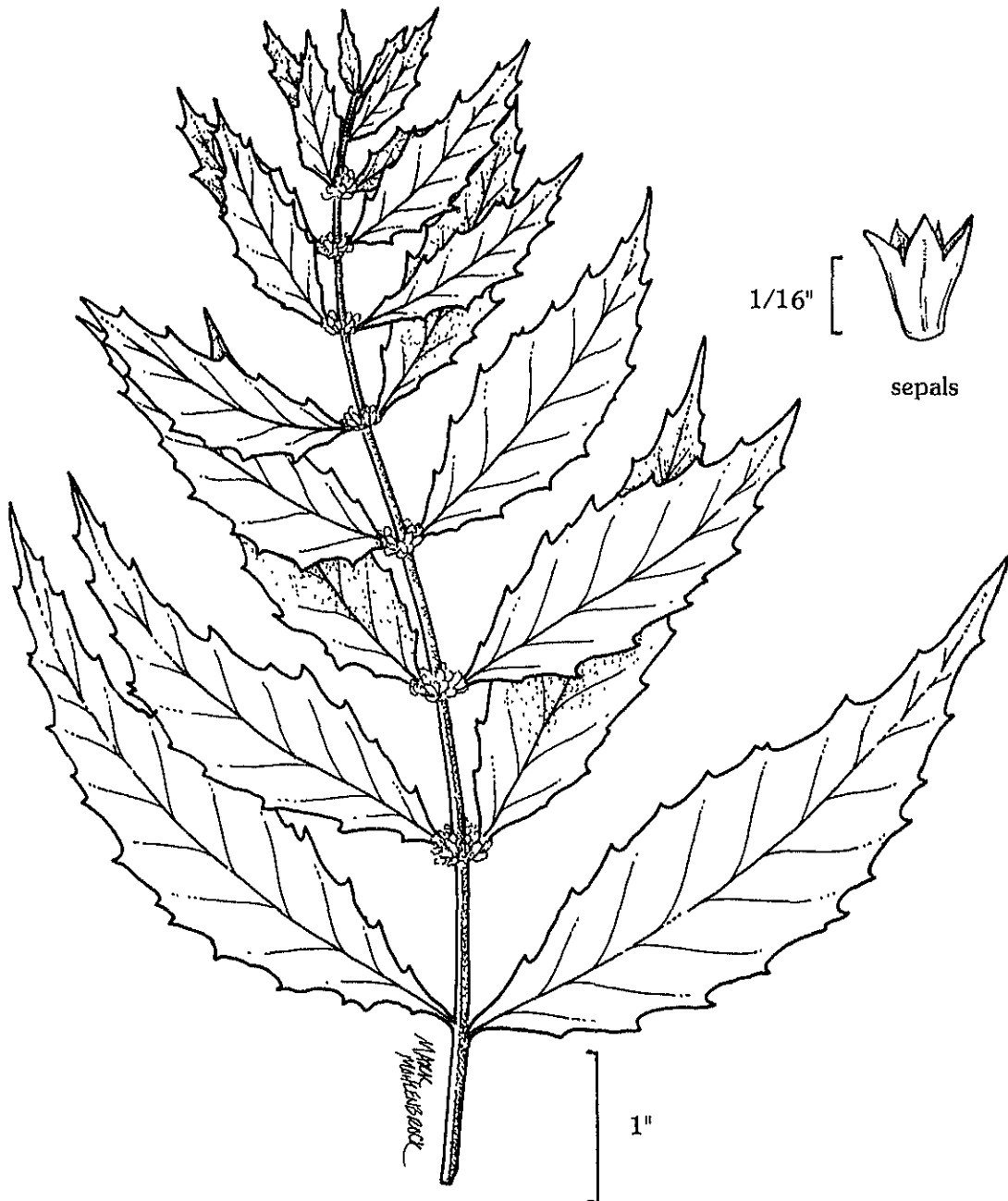
Northern Bugleweed

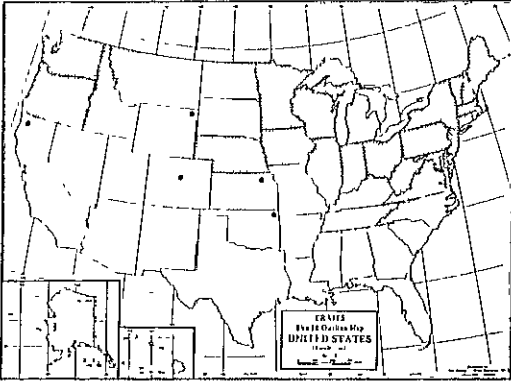
Lycopus uniflorus Michx.

Family: Mint (Labiatae)

July-September

Field Marks: All species of *Lycopus* have tiny white flowers crowded in the axils of the opposite leaves. This one differs from others in the genus by its triangular sepals, white tubers, and nearly smooth stems. The leaves are coarsely toothed but not lobed.





Local Notes:

Habitat: Wet ground in woods, along streams, in meadows, bogs, marshes, around springs.

Habit: Perennial herb with stolons bearing white tubers.

Stems: Upright, square, branched or unbranched, usually smooth, up to 2 feet tall; stolons forming white tubers.

Leaves: Opposite, simple, lanceolate to oblong-lanceolate, up to 2 1/2 inches long, pointed at the tip, tapering to the base, smooth, coarsely toothed.

Flowers: Several crowded in dense clusters in the axils of the leaves, the clusters at maturity up to 1/2 inch in diameter.

Sepals: 4 or 5, green, united below, the lobes triangular, smooth, rounded at the tip.

Petals: 5, unequal, united below, white, up to 1/8 inch long.

Stamens: 2, usually exserted beyond the petals

Pistils: Ovary superior, 4-parted.

Fruits: Nutlets 4, brownish, about 1/20 inch long.

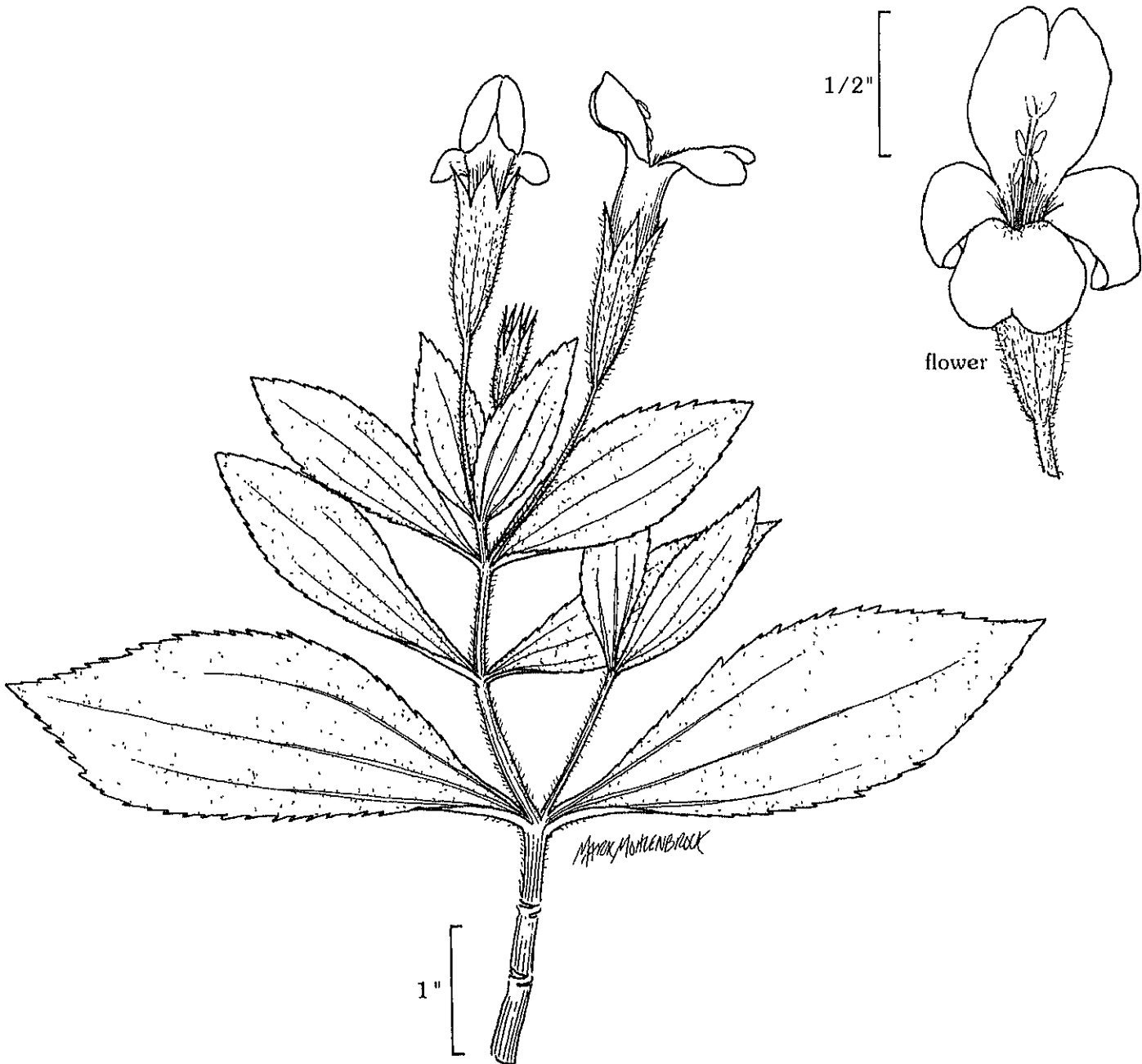
Scarlet Monkey-flower

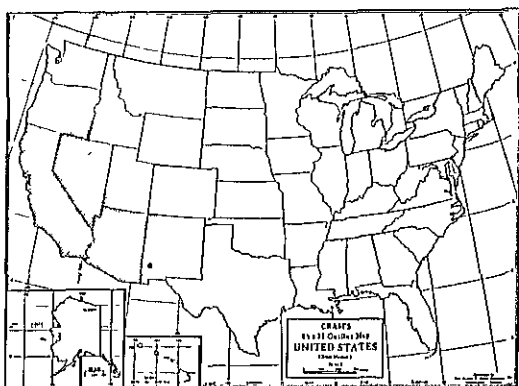
Mimulus cardinalis Dougl. ex Benth.

Family: Figwort (Scrophulariaceae)

April-October

Field Marks: This species is readily distinguished by its scarlet flowers up to 2 1/2 inches long with flower stalks longer than the tube of the sepals





Local Notes:

Habitat: Along streams, around springs, on wet cliffs, usually in the mountains.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright or ascending, branched, up to 2 1/2 feet tall, sticky-hairy

Leaves: Opposite, simple, obovate to oblong, up to 3 1/2 inches long, sticky-hairy, pointed at the tip, tapering or rounded at the base, toothed, with 3-5 main veins, sessile and sometimes clasping the stem.

Flowers: Several in racemes, showy, scarlet, up to 2 1/2 inches long, on stalks 2 1/2-3 1/2 inches long.

Sepals: 5, green, united below into a tube, winged, the tube up to 1 1/2 inches long, the teeth 1/6-1/4 inch long, pointed.

Petals: 5, united to form 2 lips, scarlet, with a yellow center and hairy yellow ridges.

Stamens: 4, extending beneath the upper lip of the flower.

Pistils: Ovary superior, smooth.

Fruits: Capsules oblongoid, up to 3/4 inch long, pointed at the tip, containing several narrow, pointed, wrinkled seeds.

Notes: This is one of the showiest wildflowers in the country.

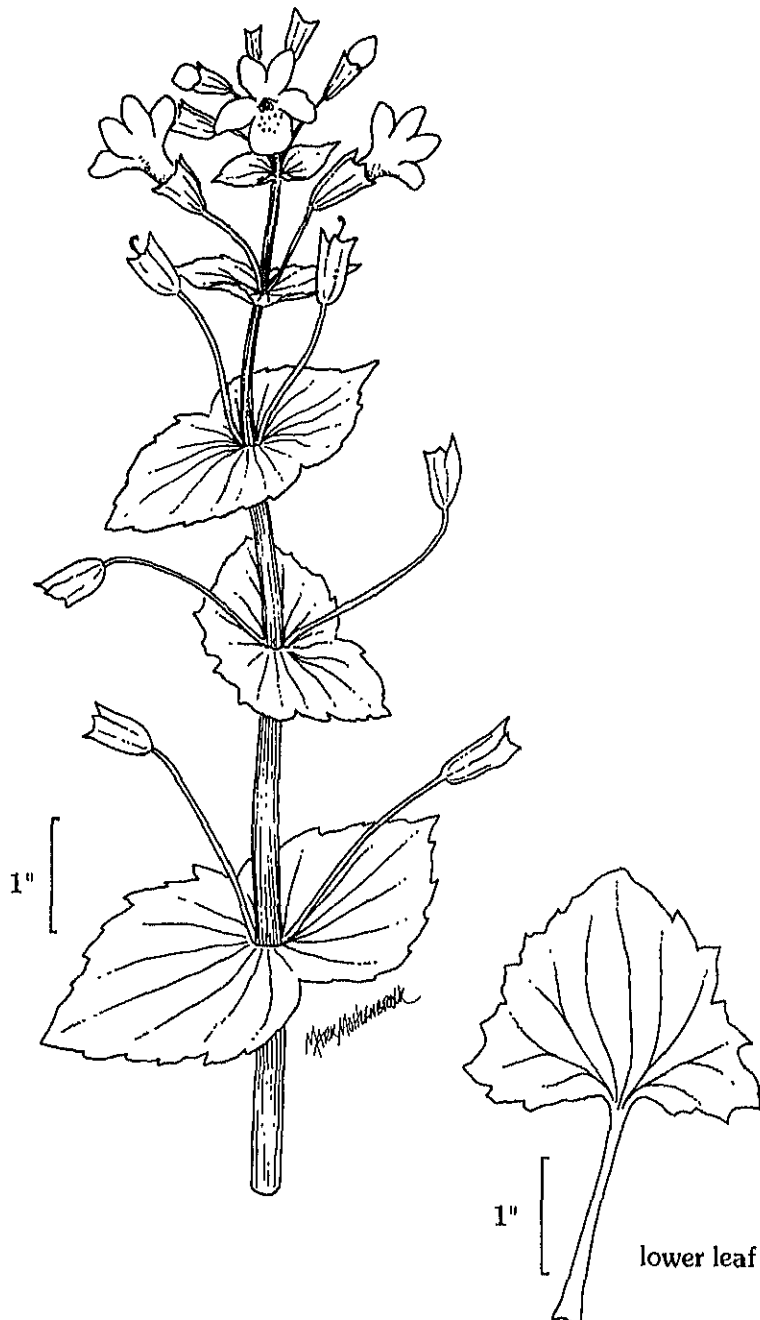
Common Large Monkey-flower

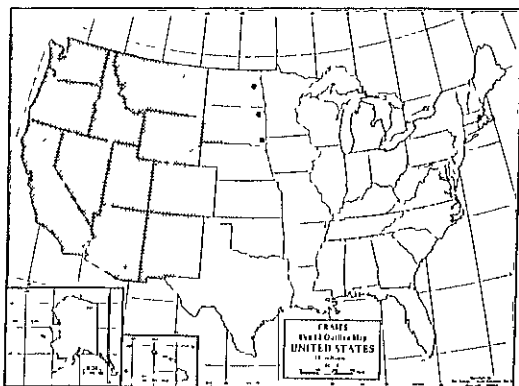
Mimulus guttatus DC.

Family: Figwort (Scrophulariaceae)

May-September

Field Marks: This is the only yellow-flowered monkey-flower that has an inflated calyx with pointed teeth. The upper leaves are usually longer than broad





Local Notes:



Habitat: Most wet, mucky places, sometimes growing in shallow standing water.

Habit: Annual or perennial herb, sometimes rooting at the lower nodes, and sometimes bearing rhizomes and/or stolons.

Stems: Upright or ascending, branched or unbranched, up to 2 1/2 feet tall, smooth or slightly hairy, sometimes hollow.

Leaves: Opposite, simple, broadly ovate to nearly round, the upper ones usually longer than broad, up to 4 inches long, toothed, smooth or slightly hairy, the upper leaves sessile, the lower on stalks up to 2 1/2 inches long.

Flowers: Borne in a terminal raceme, yellow, showy.

Sepals: 5, green, united below to form a bell, up to 3/4 inch long, each lobe triangular, but the middle one much longer than the others, and lanceolate.

Petals: 5, yellow, often spotted with red-brown, arranged to form 2 lips, one with 3 parts, the other with 2, up to 1 1/4 inches long.

Stamens: 4, two longer than the others.

Pistils: Ovary superior; styles 2-lobed.

Fruits: Capsules oblong to obovoid, narrowed to a short stalk at the base, up to 1/2 inch long; seeds up to 1/4 inch long, brown.

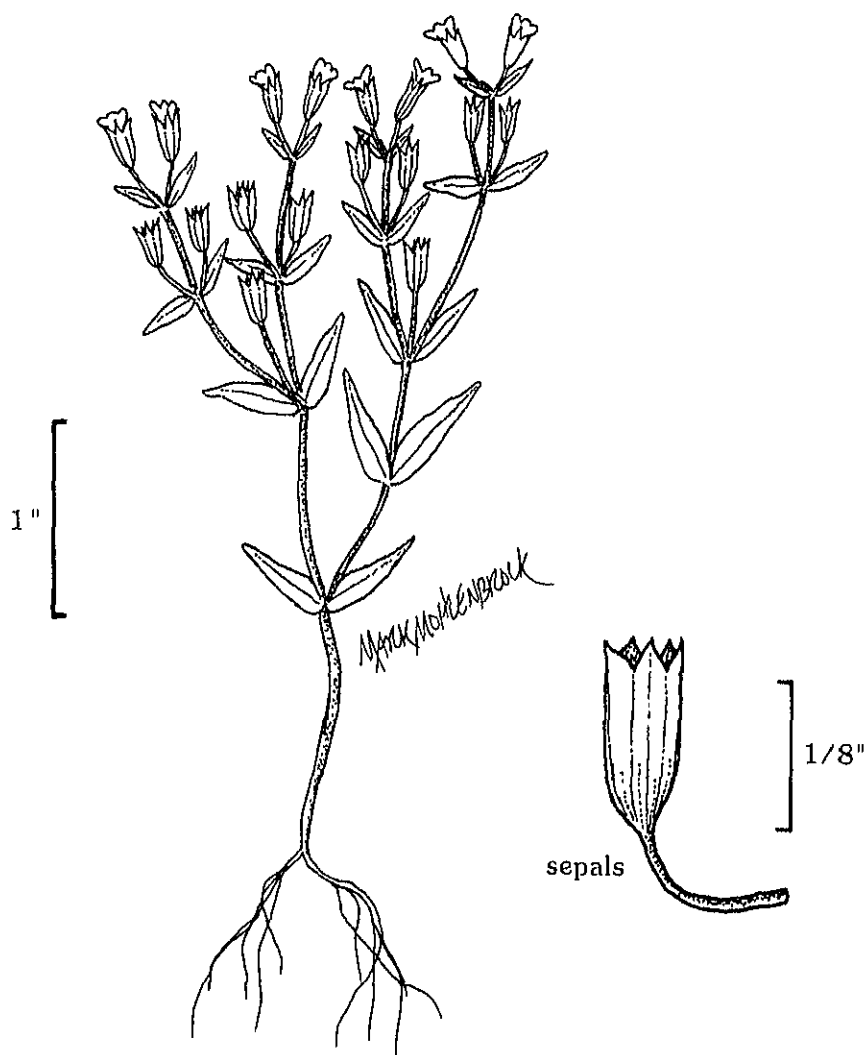
Suksdorf's Monkey-flower

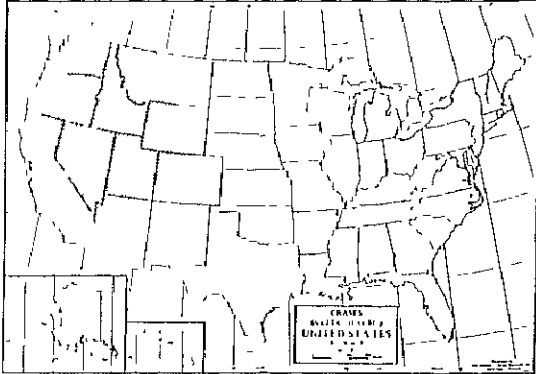
Mimulus suksdorfii Gray

Family: Figwort (Scrophulariaceae)

May-August

Field Marks: This monkey-flower differs from all others by being 4 inches to 2 feet tall, by its reddish sepals, by its 1/6-1/4 inch long yellow flowers that fall off shortly after opening, and by its glandular-hairy leaves and stems.





Local Notes:



Habitat: Moist or dry areas in pinyon-juniper woodlands or in sagebrush.

Habit: Annual herb with a slender taproot.

Stems: Upright or ascending, much branched, up to 2 feet tall, glandular-hairy.

Leaves: Opposite, simple, linear to lanceolate, up to 3/4 inch long, up to 1/6 inch wide, pointed at the tip, tapering to the base, glandular-hairy, without teeth, often turning reddish, sessile or nearly so.

Flowers: Usually borne singly in the axils of the leaves, the often curved stalks 1/3-1/2 inch long.

Sepals: 5, green or reddish, united below to form a tube much longer than the lobes, glandular-hairy, the tube 1/8-1/4 inch long, the lobes less than 1/24 inch long, broadly ovate, not ciliate.

Petals: 5, yellow with red spots, more or less 2-lipped, united below to form a short tube, 1/6-1/3 inch long.

Stamens: 4.

Pistils: Ovary superior, smooth; stigmas 2.

Fruits: Capsules ovoid, up to 1/6 inch long, barely longer than the subtending sepals; seeds numerous, yellowish, oblongoid.

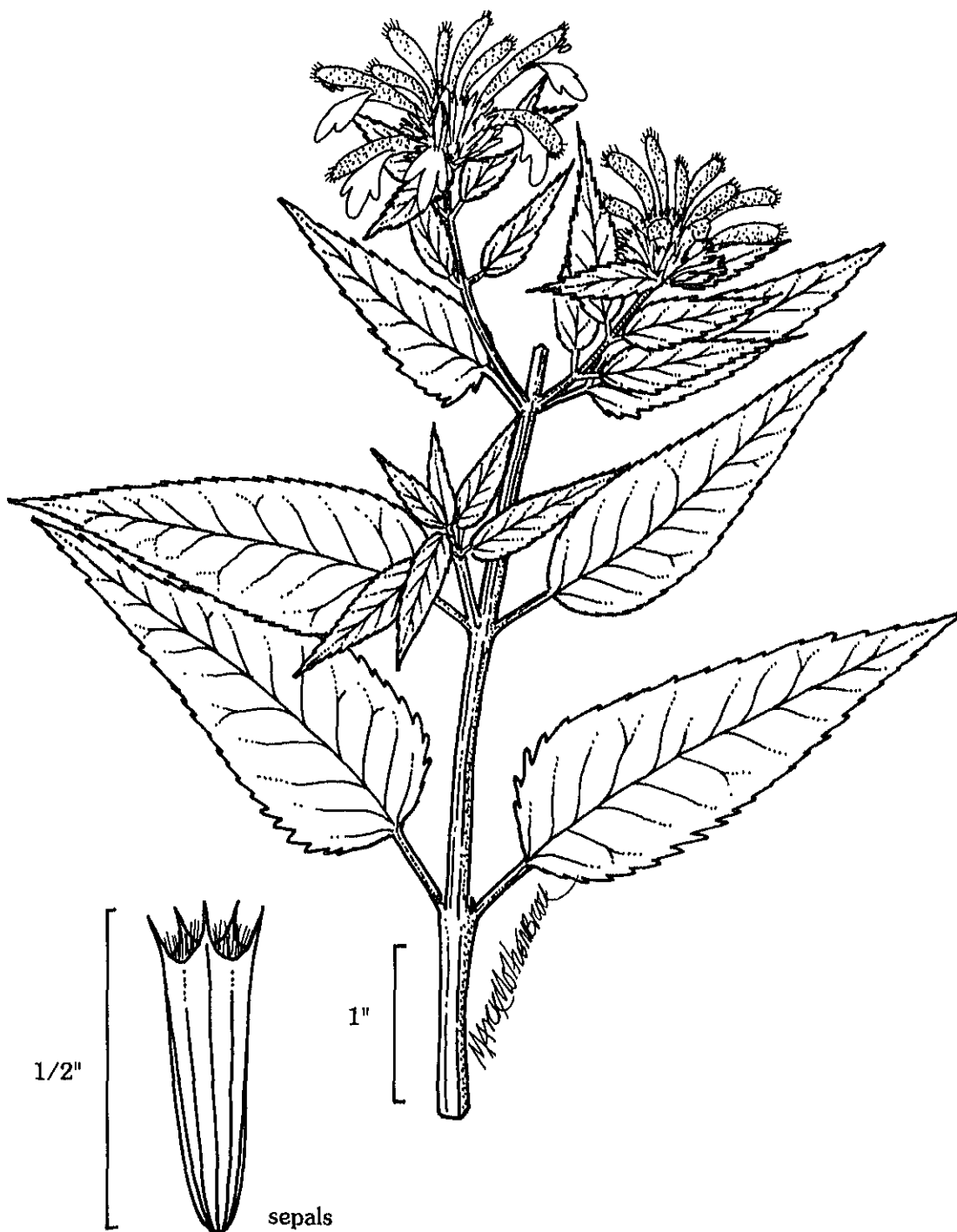
Wild Bergamot

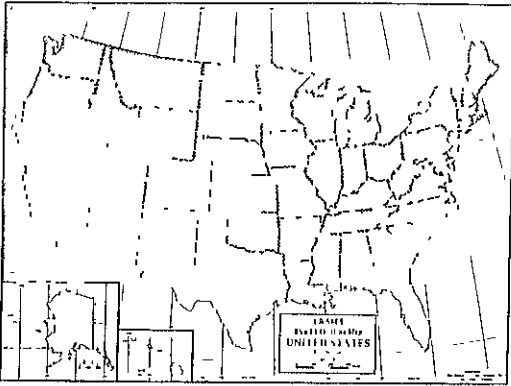
Monarda fistulosa L.

Family: Mint (Labiatae)

June-September

Field Marks: This species has single heads of flowers on each stem and very short teeth on the sepals up to 1/16 inch long.





Local Notes:

Habitat: A wide variety of habitats, including wet meadows, damp prairies, pastures, roadside ditches, along streams, around ponds, and in damp thickets.

Habit: Erect perennial, with slender, creeping rhizomes.

Stems: Upright, branched or unbranched, up to 4 feet tall, short-hairy on the upper part of the stem, usually smooth on the lower part.

Leaves: Opposite, simple, lanceolate to ovate, up to 4 inches long, up to 2 inches wide, pointed at the tip, truncate or tapering to the base, coarsely toothed, usually short-hairy, aromatic, dotted; leaf stalks up to 1 inch long.

Flowers: Numerous in single heads at the tips of the branches, each head up to 1 1/2 inches across, each flower subtended by a green to pinkish bract that often curves backward; flowers up to 1 1/2 inches long.

Sepals: 5, green, united below into a tube up to 1/2 inch long, the 5 teeth spine-like, up to 1/16 inch long.

Petals: 5, lavender to purple, united below into a tube, with 3 lobes on one side and 2 on the other, short-hairy on the outer surface.

Stamens: 2, protruding beyond the petals.

Pistils: Ovary superior, 4-parted.

Fruits: Nutlets 4, oblong to obovoid, dark brown to black, up to 1/10 inch long.

Notes: The plants of this species in the western United States are usually referred to as var. *menthifolia*. The nutlets are eaten by small mammals.

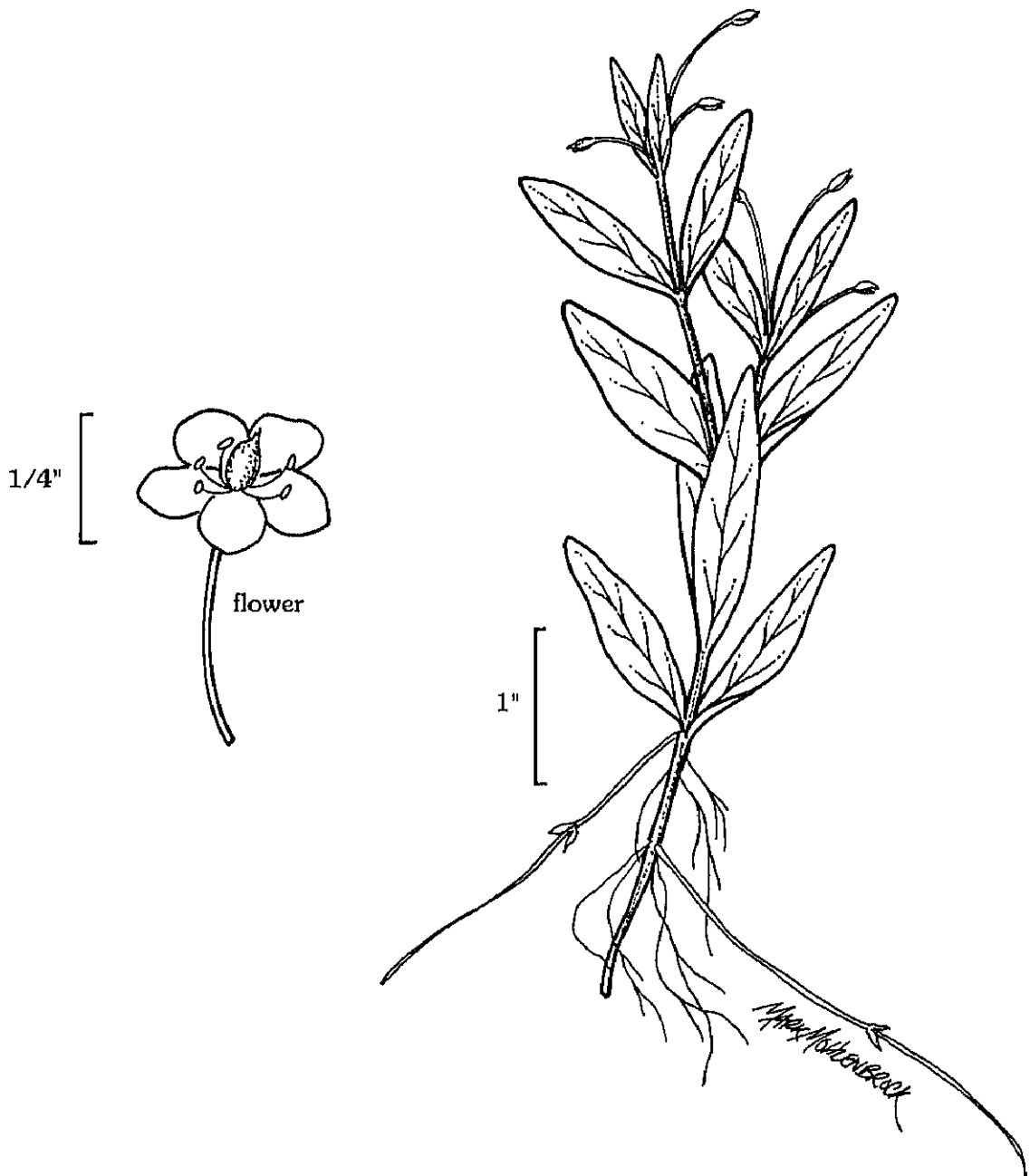
Chamisso's Miner's-lettuce

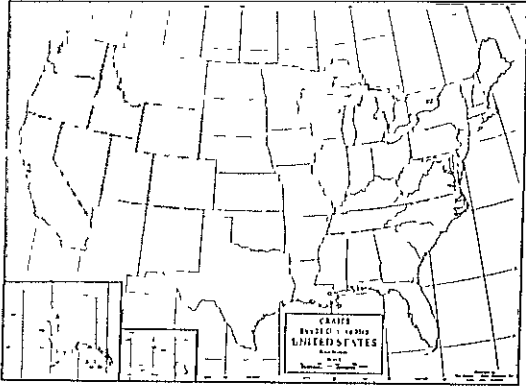
Montia chamissoi (Ledeb. ex Spreng.) Greene

Family: Purslane (Portulacaceae)

June-August

Field Marks: This species is recognized by its opposite, oblong leaves, its white or pink flowers with petals 1/4-1/3 inch long, and its tiny unequal sepals.





Local Notes:



Habitat: Wet meadows, boggy areas, along streams.

Habit: Perennial herb with creeping or floating stems; sometimes slender stolons bear small bulblets.

Stems: Creeping or floating, but with ascending branches up to 6 inches long, smooth.

Leaves: Opposite, simple, oblong, up to 2 inches long, up to $1/2$ as wide, smooth, without teeth or lobes.

Flowers: Borne singly in the axils of the leaves, or 3-8 in racemes, each flower with a slender stalk eventually recurved in fruit, the stalk up to 1 inch long.

Sepals: 2, free from each other, green, suborbicular, unequal in size, the large one about $1/6$ inch long, persistent in fruit.

Petals: Usually 5, free from each other, pink or white, $1/4$ - $1/3$ inch long.

Stamens: Usually 5, attached to the base of the petals.

Pistils: Ovary superior; styles 3.

Fruits: Capsules ovoid, up to $1/16$ inch long, smooth; seeds 1-3, black, less than $1/16$ inch long, covered with very minute spines.

Western Borax-weed

Nitrophila occidentalis (Moq.) S. Wats.

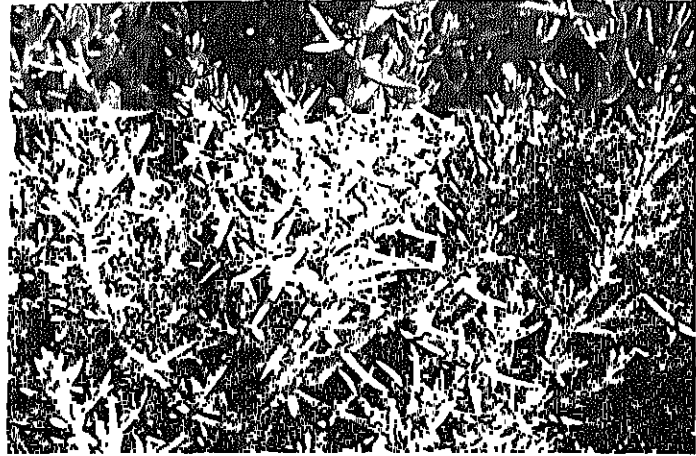
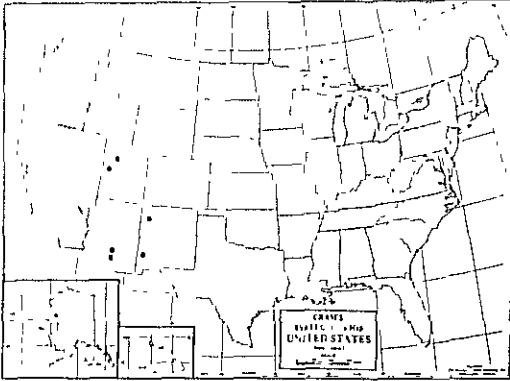
Family: Goosefoot (Chenopodiaceae)

May-October

Field Marks: *Nitrophila* has several characteristics that distinguish it from other genera in the family. the sepals are barely united or free from each other and are papery in texture; leaves are opposite.



flower with bracts



Local Notes:

Habitat: Moist alkaline habitats.

Habit: Perennial herb with deep rootstocks

Stems: Spreading but sometimes becoming upright, much branched, up to 1 foot tall, smooth

Leaves: Opposite, simple, linear to oblong, up to 1 inch long, pointed at the tip, tapering to the sessile base, somewhat fleshy, smooth, without teeth.

Flowers: Small, 1-3 in the axils of the leaves, subtended by a few short, leaf-like bracts.

Sepals: 5, green, free or nearly so from each other, oblong, up to 1/10 inch long, pink at first, fading to straw-colored, somewhat papery in texture.

Petals: 0

Stamens: 5, united at the base.

Pistils: Ovary superior, smooth; stigmas 2.

Fruits: Ovoid, beaked, smooth, shorter than the subtending sepals, brown; seeds minute, black, shiny.

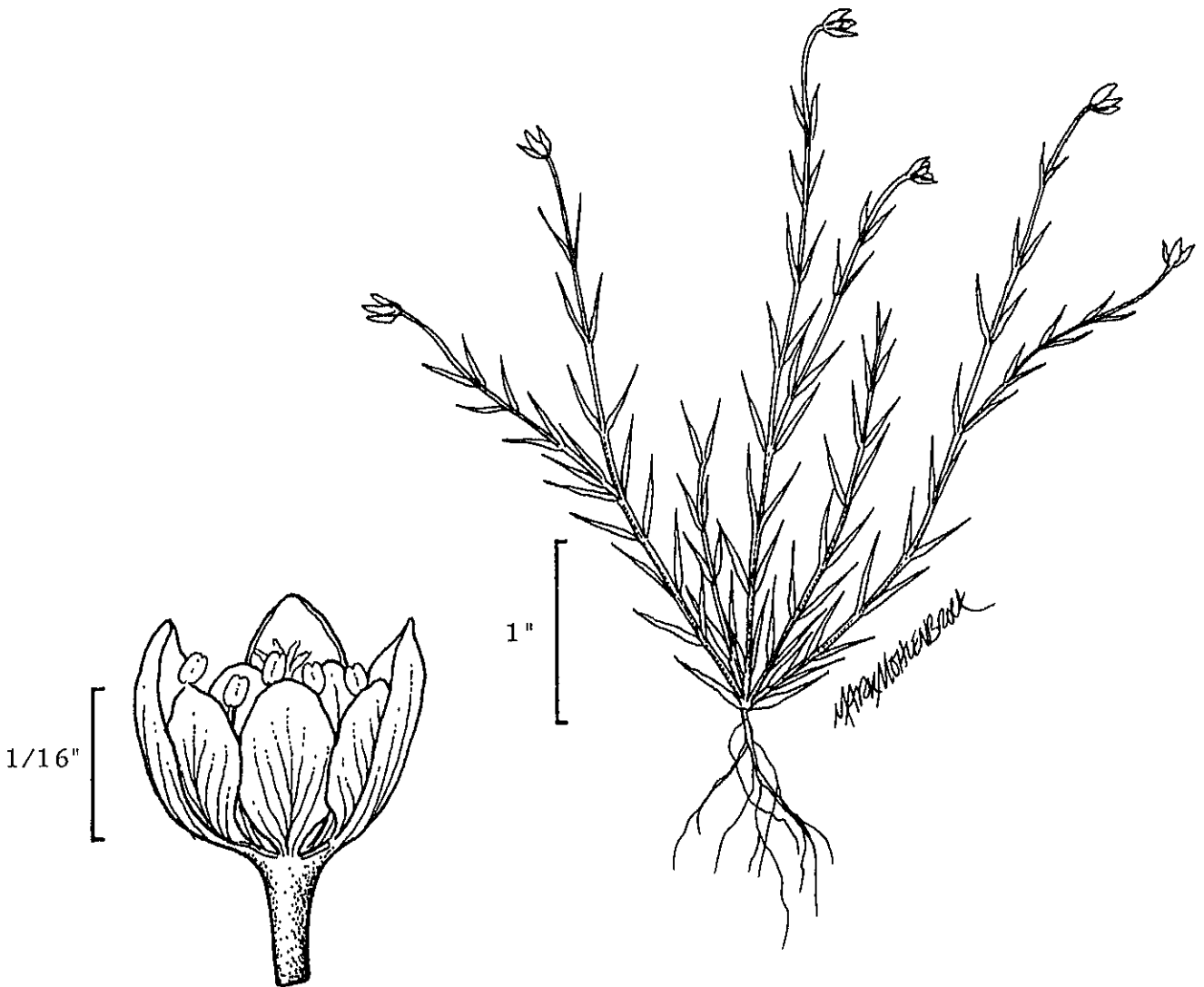
Arctic Pearlwort

Sagina saginoides (L.) Karst.

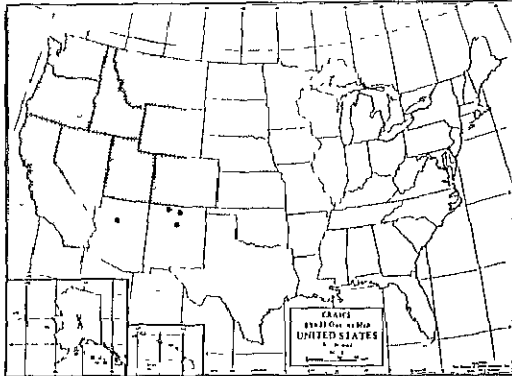
Family: Pink (Caryophyllaceae)

May-December

Field Marks: This dwarf, matted pearlwort is a perennial with 5 sepals no more than 1/10 inch long, with the petals usually slightly shorter.



flower with two sepals removed



Local Notes:



Habitat: Moist areas in the mountains.

Habit: Perennial herb with a thickened root.

Stems: Lying flat on the ground to ascending, mat-forming, up to 4 inches tall, smooth.

Leaves: Opposite, simple, thread-like to linear, 1/4-1/2 inch long, smooth, without teeth.

Flowers: Usually in the axils of the uppermost leaves, on slender stalks 1/4-1/2 inch long, smooth, often curved near the tip.

Sepals: 5, green, oval, up to 1/10 inch long, rounded at the tip, green.

Petals: 5, white, oval, up to 1/16 inch long, rounded at the tip.

Stamens: 5.

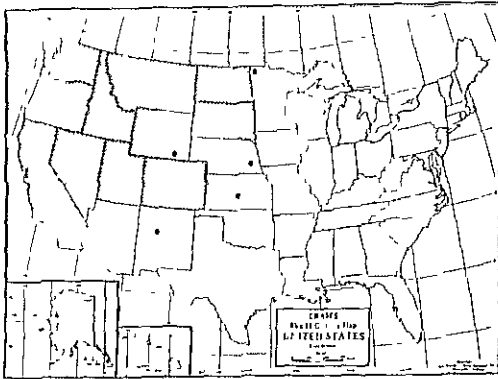
Pistils: Ovary superior, smooth.

Fruits: Capsules ovoid, up to 1/8 inch long, smooth.

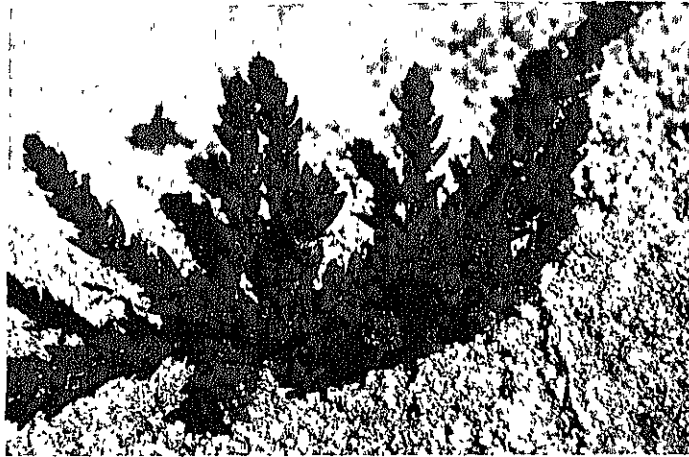
Salicornia rubra A. Nels.

July-November

A detailed botanical line drawing. On the left, a branch of a plant is shown, featuring several upright, slender stems. Each stem is densely covered with small, triangular, scale-like structures. The branch is labeled with a vertical scale bar on the left indicating "1''" and a handwritten signature "MARK MOORE/BOCK" near the base. On the right, a single flower is depicted, showing a broad, lobed calyx at the base and two elongated, curved petals. It is labeled "flower" above and has a vertical scale bar to its right indicating "1/12''".



Local Notes:



Habitat: Moist alkaline or salty areas.

Habit: Annual herb with fibrous roots.

Stems: Upright or ascending, branched from the base, up to 1 foot tall, smooth, with opposite, jointed branchlets, with the joints longer than thick, usually turning reddish.

Leaves: Reduced to scales, opposite.

Flowers: 1-7 in a group, sunken in the joints of succulent spikes, the joints longer than thick, the spikes up to 2 1/2 inches long, up to 1/8 inch thick, with the central flower higher than the others.

Sepals: United, barely with 3-4 teeth, rather fleshy

Petals: 0.

Stamens: 1-2.

Pistils: Ovary superior; styles 2.

Fruits: Oblongoid, more or less enclosed by the fleshy sepals; seeds yellow-brown, minutely hairy, about 1/12 inch long.

Long-leaf Starwort

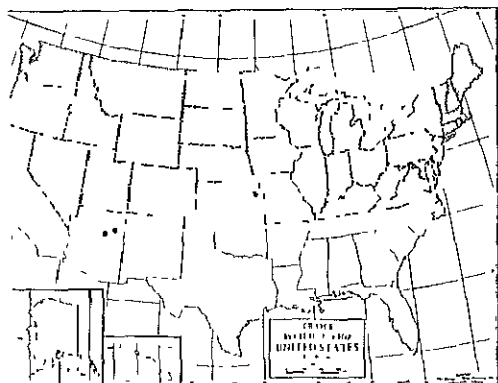
Stellaria longifolia Muhl. ex Willd.

Family: Pink (Caryophyllaceae)

May-July

Field Marks: This *Stellaria* differs from all others by a combination of 3 styles, flowers in widely spreading cymes, sepals smooth, and leaves rough to the touch along the edges.





Local Notes:



Habitat: Wet meadows, wet woods, fens, boggy areas, along streams.

Habit: Sprawling perennial with slender roots.

Stems: Sprawling or becoming somewhat upright, square, smooth except for roughness on the angles, up to 18 inches long.

Leaves: Opposite, simple, linear to narrowly lanceolate to elliptic, up to 2 inches long, rarely up to 1/3 inch wide, rough along the edges and often ciliate at the base.

Flowers: Few in widely spreading cymes, subtended by ovate to lanceolate bracts up to 1/4 inch long; flower stalks slender, spreading or reflexed, up to 1 inch long.

Sepals: 5, free from each other, green, lanceolate, up to 1/6 inch long, smooth.

Petals: 5, but appearing to be 10 because each one is deeply 2-lobed, free from each other, 1/6-1/4 inch long.

Stamens: 10.

Pistils: Ovary superior; styles 3.

Fruits: Capsules yellow-brown to dark brown, ovoid, longer than the persistent sepals; seeds brown, oblongoid.

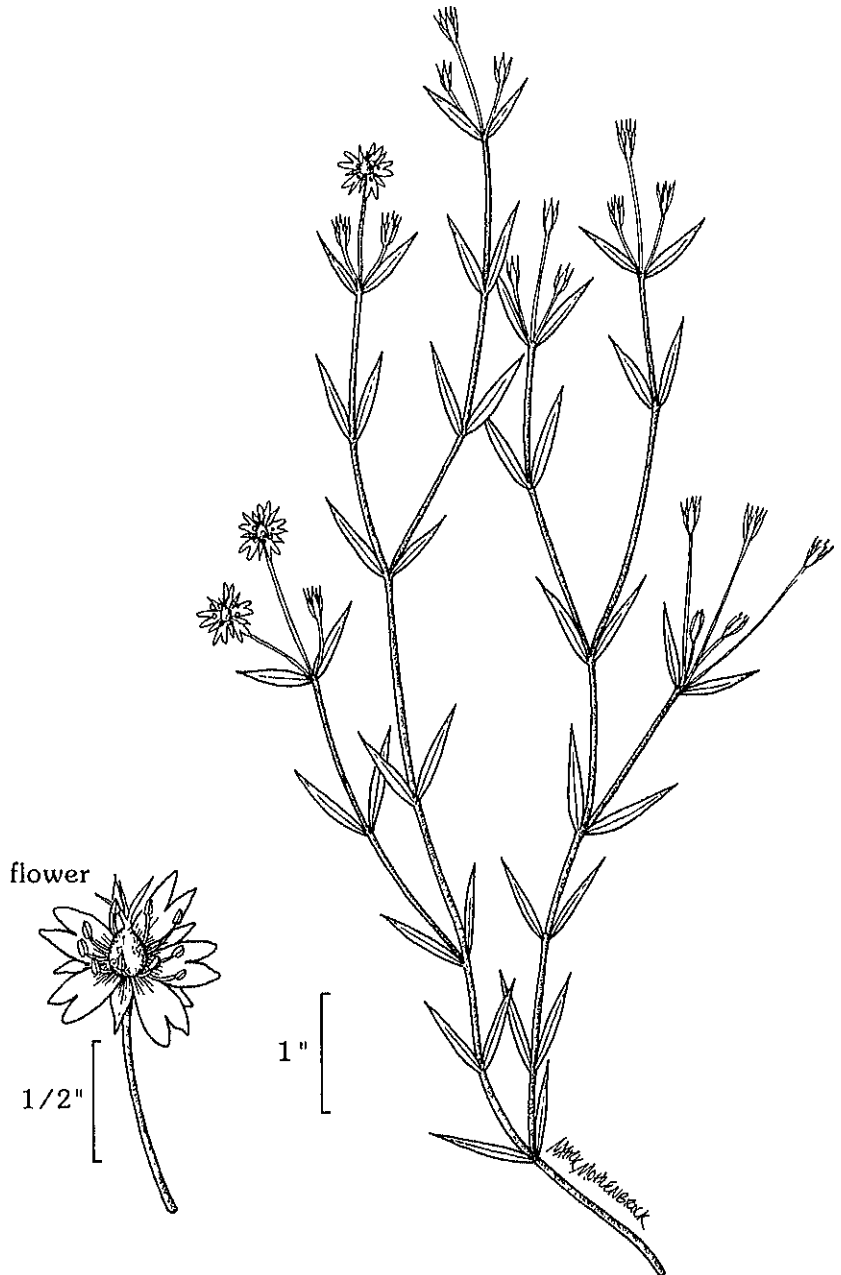
Long-stalk Starwort

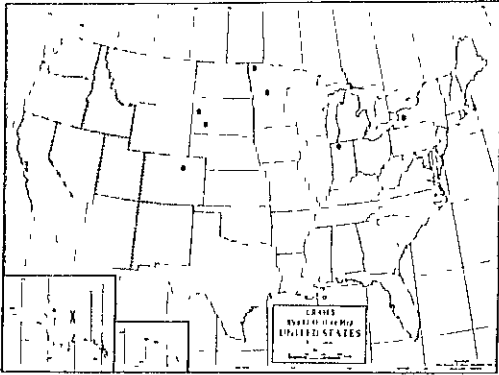
Stellaria longipes Goldie

Family: Pink (Caryophyllaceae)

May-August

Field Marks: The 5 white petals are a little longer than the sepals and notched at the tip. The flower stalks stand upright, rather than curved. The capsules are dark brown





Local Notes:

Habitat: Most moist areas.

Habit: Perennial, tufted herb with creeping rhizomes.

Stems: Erect or ascending, branched or unbranched, up to 10 inches long, smooth or sparsely hairy.

Leaves: Opposite, simple, ascending, linear-lanceolate, up to 1 inch long, pointed at the tip, tapering to the base, smooth, without teeth.

Flowers: 1 or few at the tip of the stem; stalks upright, not curved, slender, up to 1 1/2 inches long

Sepals: 5, green, free from each other, lanceolate to oblong, up to 1/4 inch long, pointed at the tip, smooth.

Petals: 5, white, free from each other, a little longer than the sepals, notched at the tip.

Stamens: 10.

Pistils: Ovary superior, smooth.

Fruits: Capsules narrowly ovoid, dark brown, longer than the sepals, smooth.

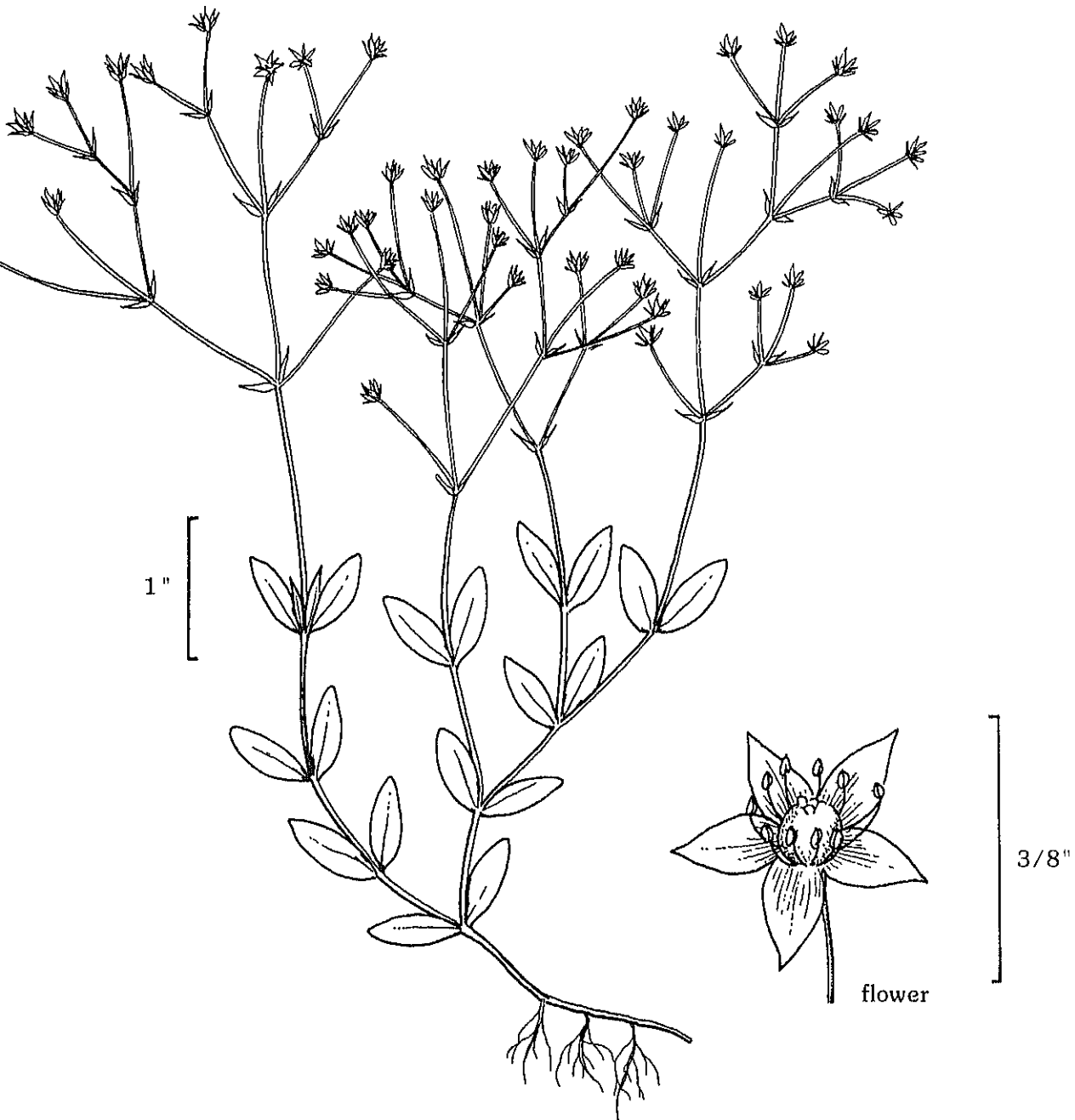
Umbellate Starwort

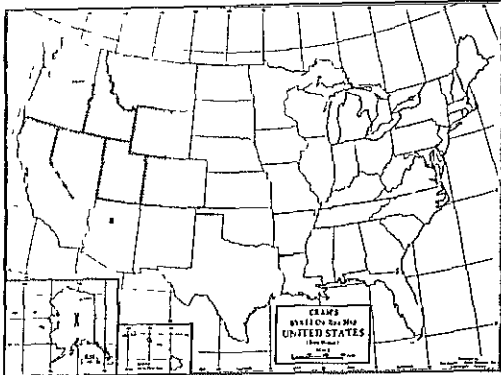
Stellaria umbellata Turcz. ex Karel. & Kir.

Family: Pink (Caryophyllaceae)

July-August

Field Marks: This starwort differs by having tiny, transparent bracts, oblong to ovate leaves, and petals, if present, much shorter than the sepals





Local Notes:

Habitat: Moist soil in woods and thickets.

Habit: Perennial herb with slender rootstocks.

Stems: Sprawling to upright, weak, branched, up to 1 foot long, smooth.

Leaves: Opposite, simple, oblong to ovate, up to 1 inch long, pointed at the tip, tapering to the base, smooth except for cilia near the base.

Flowers: Few to several in umbel-like cymes, subtended by tiny, transparent bracts; flower stalks very slender, smooth, recurved at the tip.

Sepals: 5, green with whitish borders, up to 1/6 inch long, pointed at the tip.

Petals: 5 or absent, very tiny, much shorter than the sepals.

Stamens: 10.

Pistils: Ovary superior; styles 3.

Fruits: Capsules oblongoid to ovoid, up to 1/4 inch long, smooth; seeds many, light brown.

American Speedwell

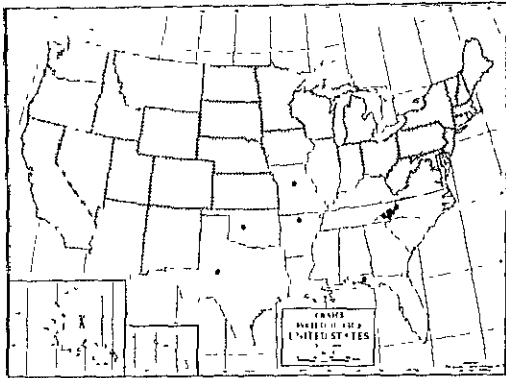
Veronica americana Schweinitz ex Benth.

Family: Figwort (Scrophulariaceae)

July-August

Field Marks: The distinguishing features of this species are its axillary racemes of blue flowers on stalks 1/4-1/2 inch long, and its smooth, simple leaves on short stalks.





Local Notes:



Habitat: Wet meadows, along streams, around lakes, around springs, often in water.

Habit: Perennial herb with rhizomes

Stems: Spreading to eventually upright, rooting at the nodes, up to 2 feet long, smooth.

Leaves: Opposite, simple, lanceolate to ovate, up to 2 inches long, up to 1 1/4 inches wide, rounded or pointed at the tip, rounded at the base, toothed or without teeth, smooth.

Flowers: 10-25 in axillary racemes, the racemes up to 5 inches long; bracts small; flower stalks up to 1/2 inch long.

Sepals: 4, green, united at the base, up to 1/4 inch long, the lobes lanceolate to ovate.

Petals: 4, blue, united to form a short tube, 1/4-1/2 inch across, the lobes unequal in size.

Stamens: 2, attached to the petals.

Pistils: Ovary superior, smooth.

Fruits: Capsules nearly spherical, up to 1/6 inch in diameter, smooth, not notched at the tip; seeds numerous, very small, brownish.

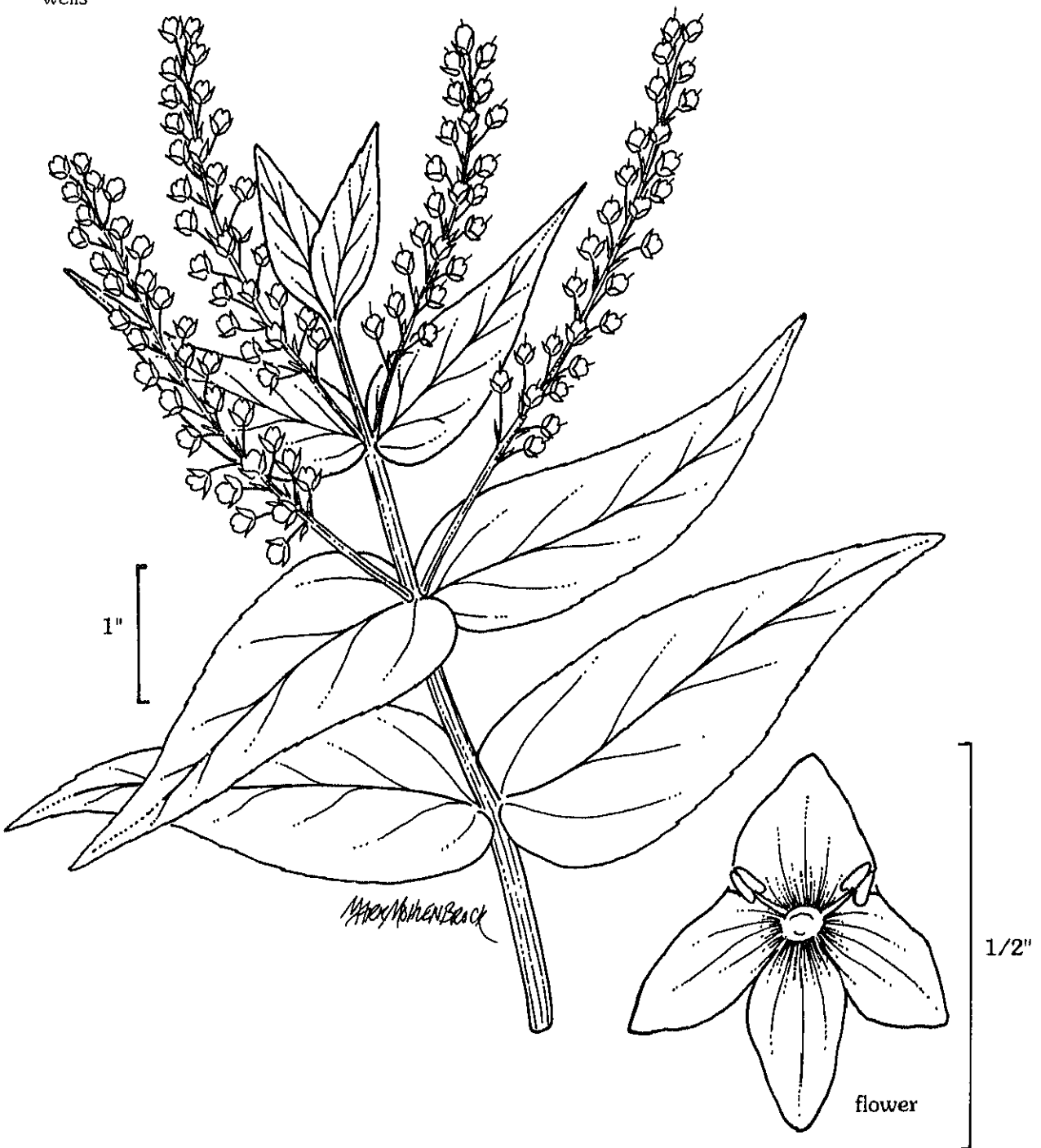
Water Speedwell

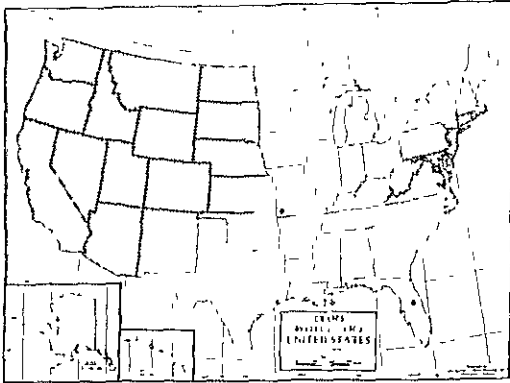
Veronica anagallis-aquatica L.

Family: Figwort (Scrophulariaceae)

June-August

Field Marks: The bluish (less commonly pinkish) flowers borne in axillary racemes and the broadly lanceolate to ovate sessile upper leaves distinguish this species from all other speedwells





Local Notes:



Habitat: Wet areas along and in streams, wet meadows, marshes, ditches.

Habit: Herbaceous perennial from slender rhizomes.

Stems: Upright or ascending, up to 2 feet long, branched or unbranched, smooth or sometimes glandular-hairy near the flowers.

Leaves: Opposite, simple, smooth, the uppermost sessile, broadly lanceolate to ovate, up to 3 inches long, up to 1 1/4 inches wide, pointed at the tip, rounded or heart-shaped at the base, the lowermost oblanceolate to obovate, rounded or pointed at the tip, sometimes with a short stalk.

Flowers: Many in axillary racemes, each flower up to 1/2 inch across, on a stalk 1/6-1/4 inch long.

Sepals: 4, green, united at the base, each segment lanceolate, up to 1/4 inch long.

Petals: 4, bluish (less commonly pinkish), united below, the lobes unequal in size .

Stamens: 2.

Pistils: Ovary superior.

Fruits: Capsules up to 1/6 inch long, nearly as wide, with numerous minute seeds.

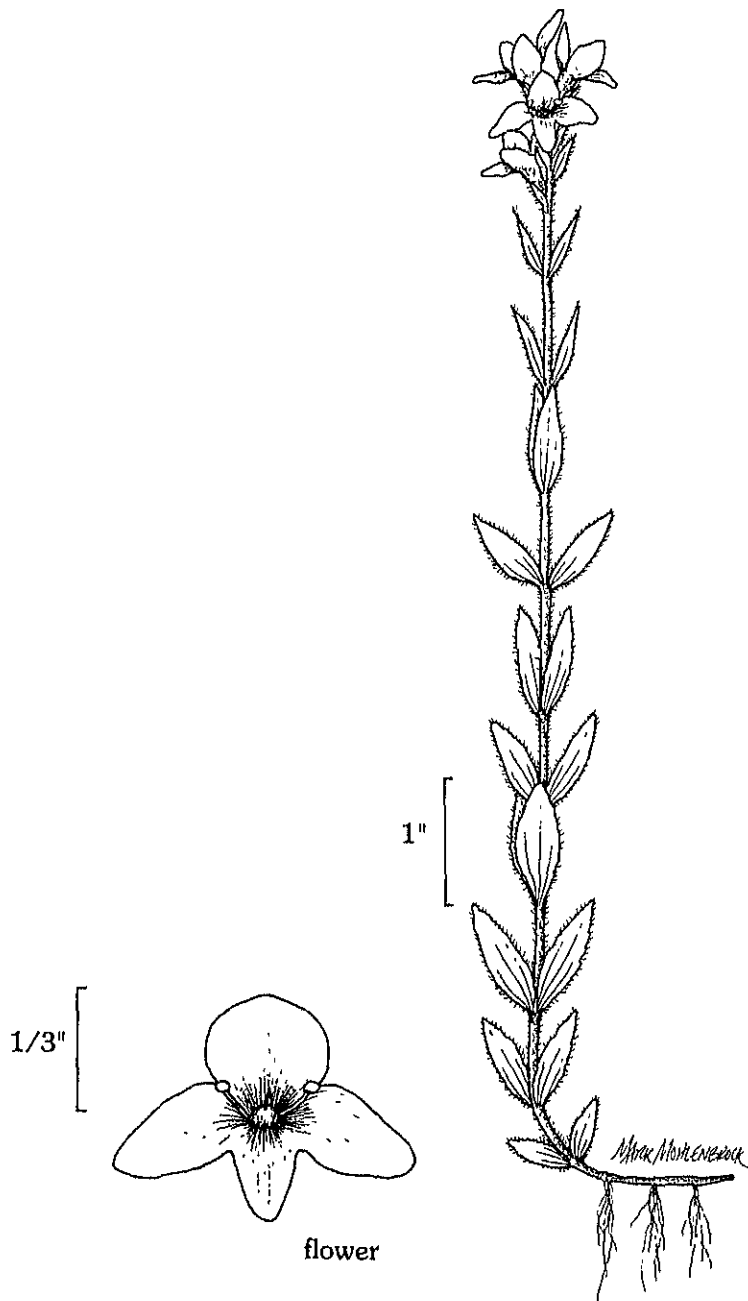
American Alpine Speedwell

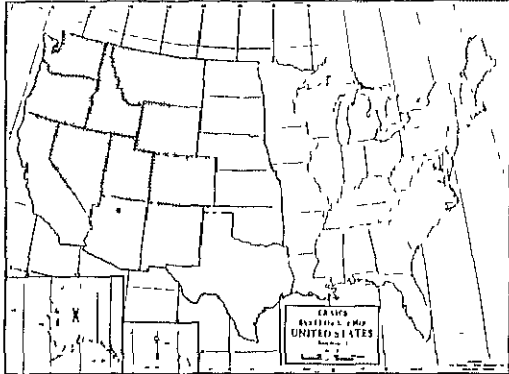
Veronica wormskjoldii Roem. & J.A. Schultes

Family: Figwort (Scrophulariaceae)

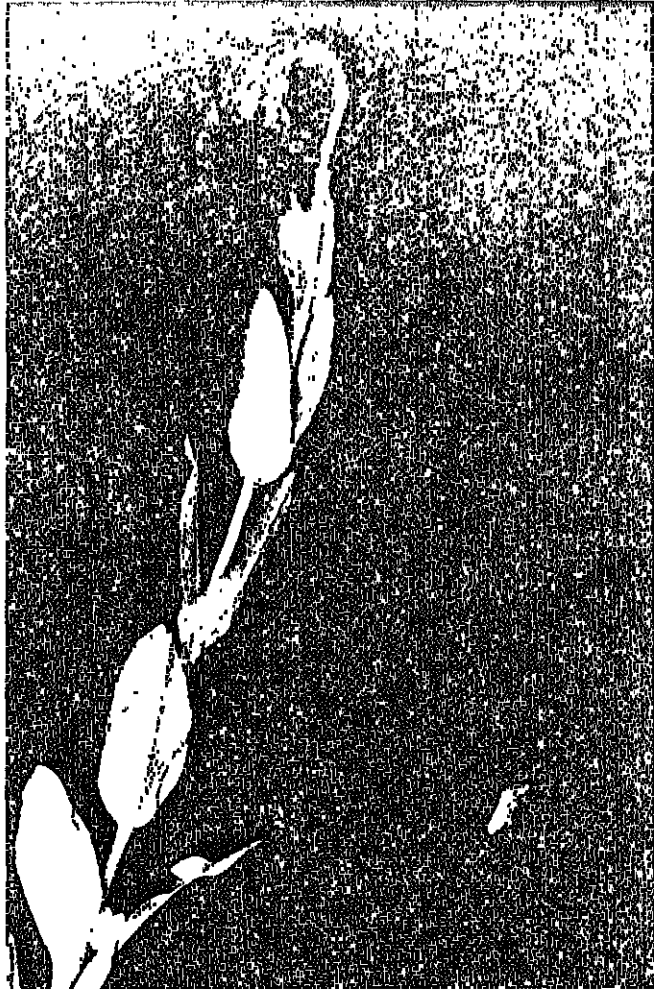
June-August

Field Marks: Like most species of *Veronica*, this one has opposite, simple leaves, 4 blue united petals, and 2 stamens. It differs from all others in bearing terminal racemes, sepals equal in length, and stamens that do not protrude above the petals





Local Notes:



Habitat: Wet meadows, particularly in the high mountains.

Habit: Perennial herb with slender rhizomes.

Stems: Upright, usually unbranched, up to 12 inches tall, softly hairy or glandular-hairy

Leaves: Opposite, simple, oval to ovate, up to 1 1/4 inches long, pointed or rounded at the tip, rounded at the sessile or short-stalked base, round-toothed or without teeth, hairy.

Flowers: Several in terminal racemes, on stalks up to 1/4 inch long, each flower up to 1/3 inch across, subtended by a small bract

Sepals: 4, green, united below, rounded at the tip, up to 1/6 inch long.

Petals: 4, blue, united below.

Stamens: 2, not protruding above the petals.

Pistils: Ovary superior.

Fruits: Capsules ovoid, up to 1/3 inch long, shallowly notched at the tip, bearing many minute seeds.

Notes: This plant is sometimes known in the western states as *V. nutans*. The seeds may be eaten by small mammals.

GROUP 8

**Dicot Herbs with
All the Leaves Simple
and Basal and/or Alternate**

GROUP 8

**Dicot Herbs with
All the Leaves Simple
and Basal and/or Alternate**

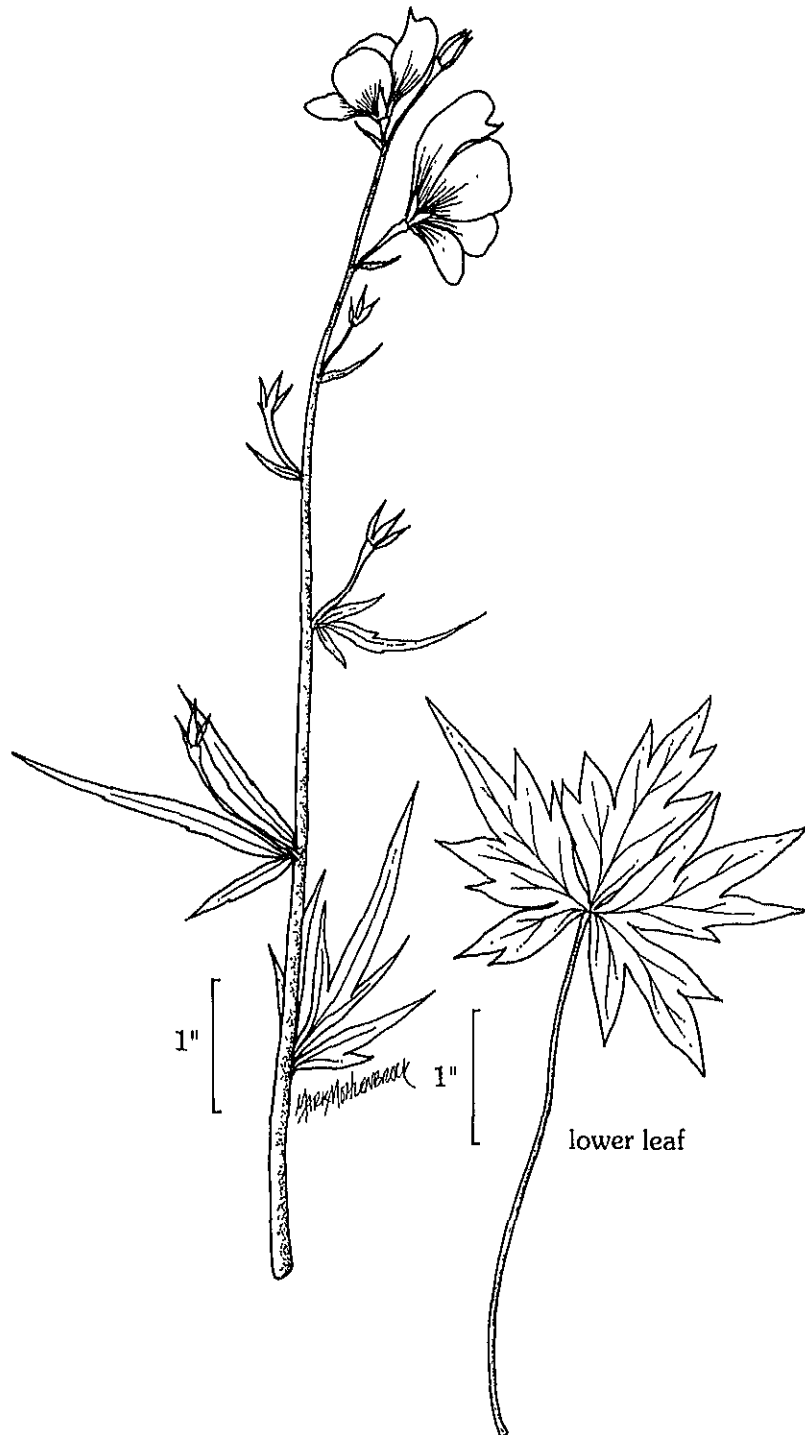
Columbia Monkshood

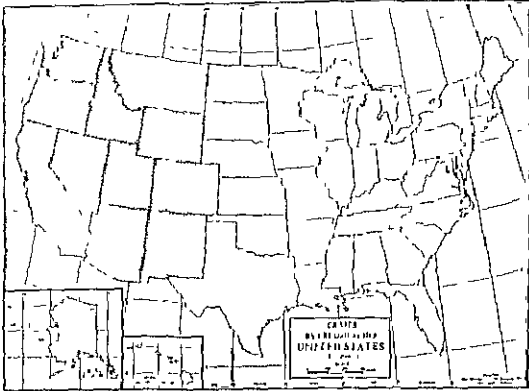
Aconitum columbianum Nutt.

Family: Butter-cup (Ranunculaceae)

June-August

Field Marks: This species is distinguished by its hood-like upper sepal that is purple like the petals and its palmately lobed leaves.





Local Notes:

Habitat: Wet meadows, moist woods.

Habit: Perennial herb with a thickened rootstock and fibrous roots.

Stems: Upright, usually rather stout, up to 6 feet tall, smooth to hairy, the hairs sometimes glandular.

Leaves: Basal and alternate and cauline, palmately divided into 3-7 lobes, up to 4 inches long, sometimes wider than long, smooth or hairy, the lobes toothed or more deeply cut; basal leaves with a stalk up to 10 inches long; uppermost cauline leaves sessile.

Flowers: Several in usually uncrowded racemes, racemes up to 10 inches long; flower stalks up to 1/2 inch long.

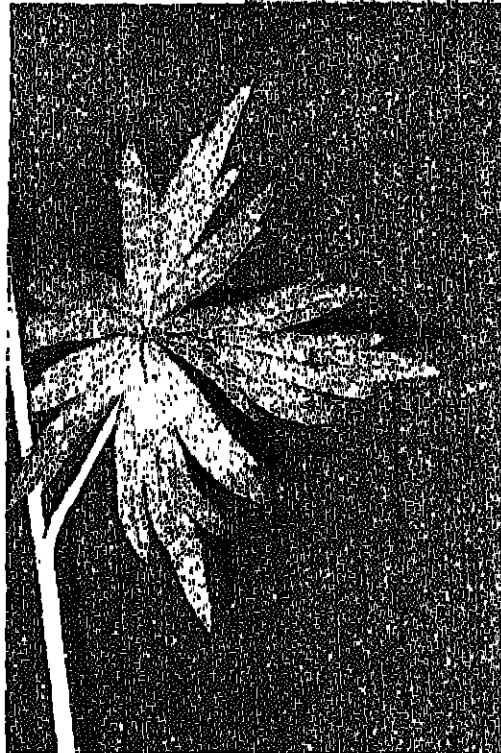
Sepals: 5, purple, usually slightly hairy, the uppermost forming a hood up to 1 1/4 inches long; lateral sepals 2, oval, up to 3/4 inch long; lower sepals 2, narrower, up to 1/2 inch long.

Petals: 2, whitish, projecting beneath the hooded sepal and forming a coiled spur at its base.

Stamens: Numerous, with broad filaments.

Pistils: 3, free from each other.

Fruits: 3 follicles, erect, smooth or hairy, up to 3/4 inch long; seeds brown to black, delicately winged.



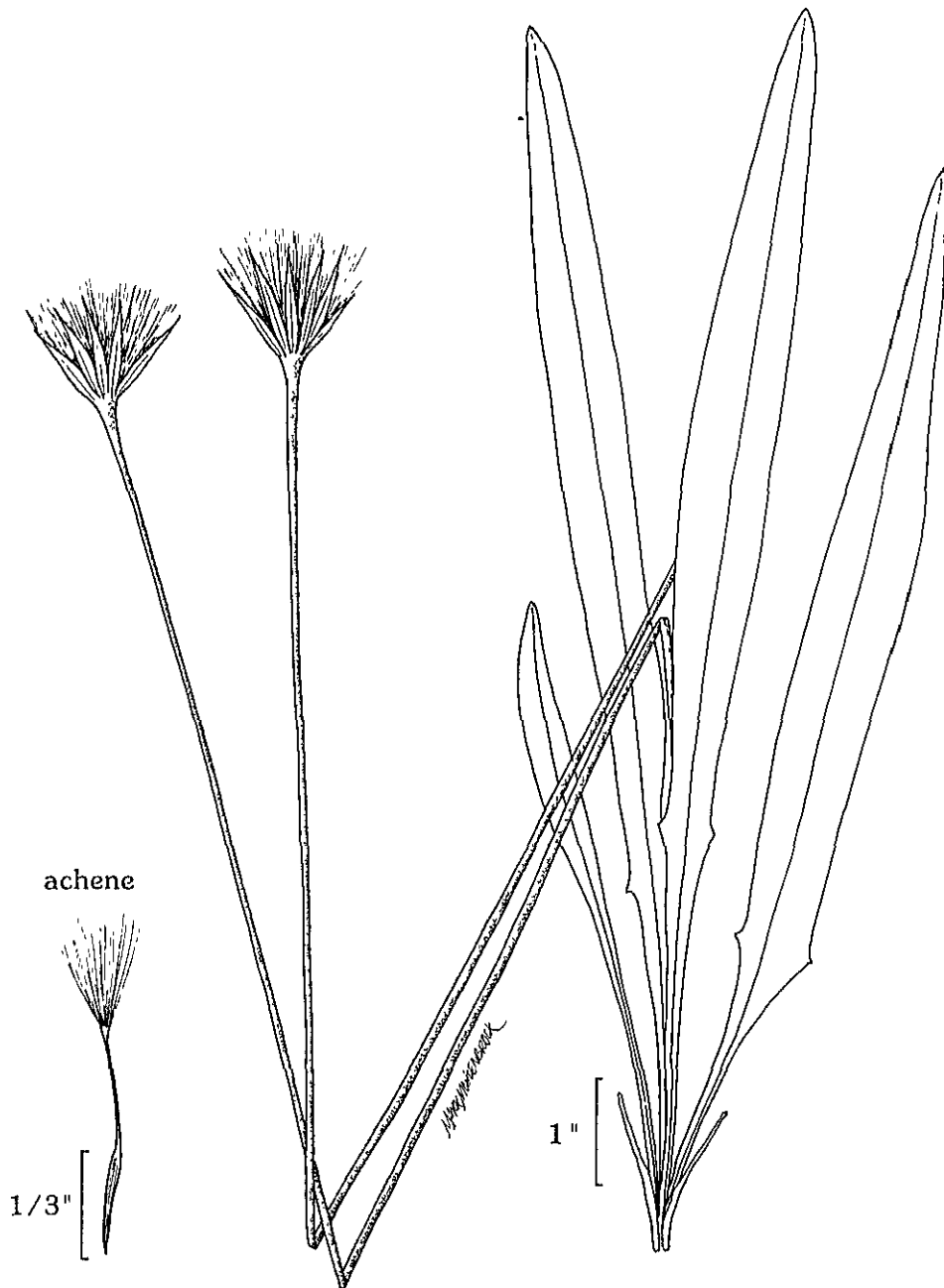
Orange-flower False-dandelion

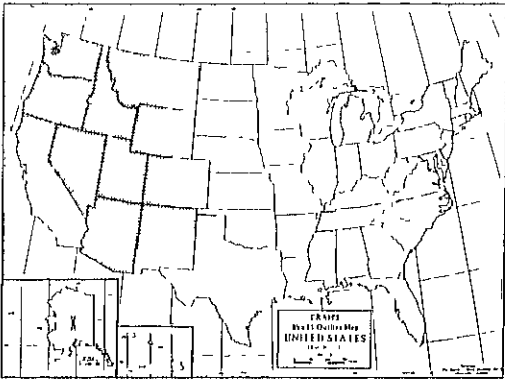
Agoseris aurantiaca (Hook.) Greene

Family: Composite (Compositae)

June-August

Field Marks: The solitary burnt orange flower heads have only ray flowers. The flowers fade to pink or purple as they dry out. There is milky sap present.





Local Notes:



Habitat: Wet meadows and fields.

Habit: Perennial herb with a thickened rootstock.

Stems: Aerial stem bears only a flower head, up to 1 1/2 feet tall, hairy, particularly just beneath the head; milky sap present.

Leaves: All basal, simple or with a few jagged segments, lanceolate to oblong, up to 10 inches long, pointed at the tip, tapering to the base, more or less smooth except for the hairy midvein; milky sap present.

Flowers: Crowded into solitary heads 3/4-1 inch across, consisting only of burnt orange ray flowers; each head subtended by several oblong to lanceolate, pointed bracts.

Sepals: 0.

Petals: 5, united to form burnt orange ray flowers 1/4-1/2 inch long.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes linear, 1/6-1/3 inch long, strongly ribbed, tapering to a slender beak, with a tuft of soft hairs at the tip of the beak.

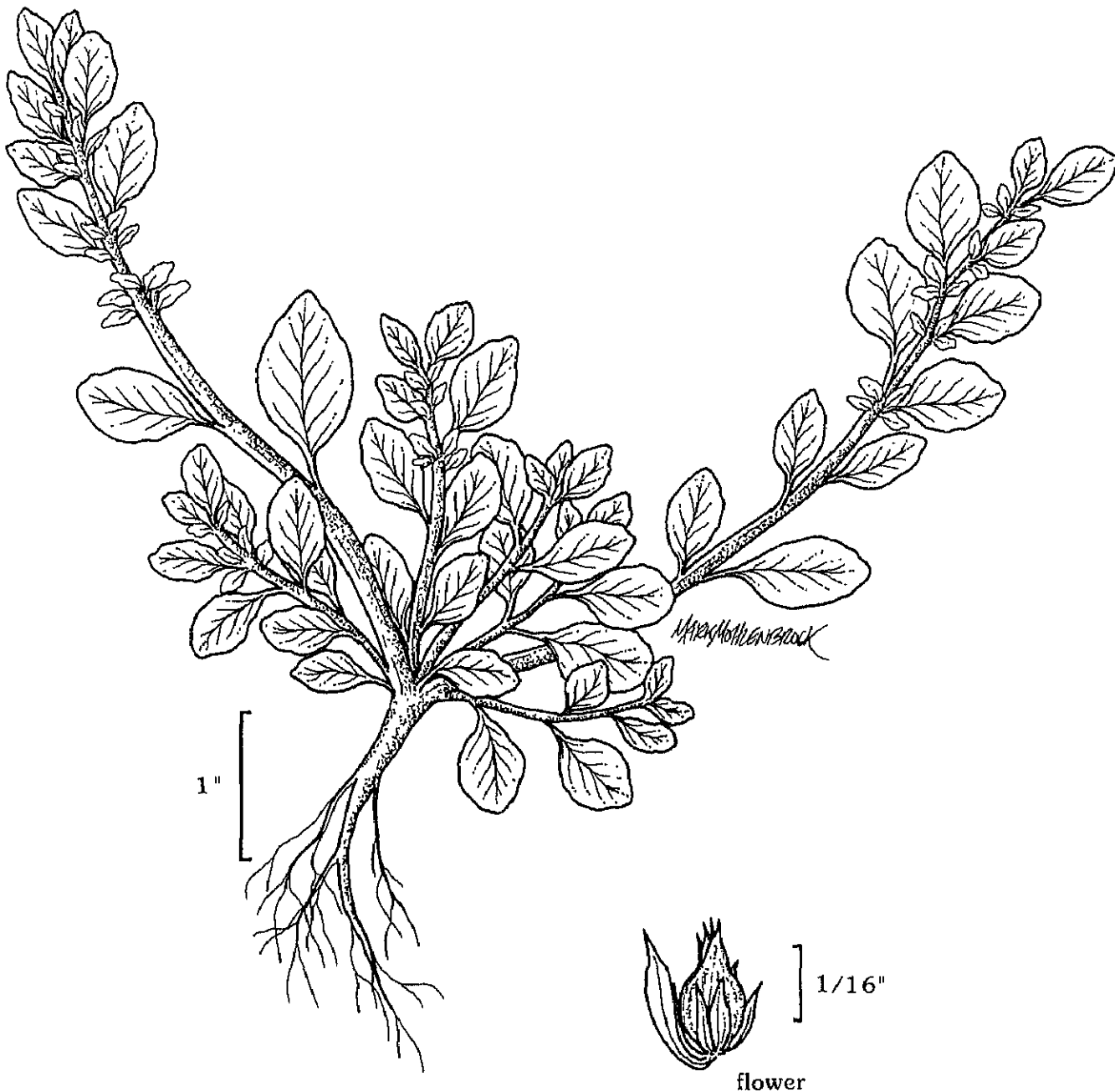
California Amaranth

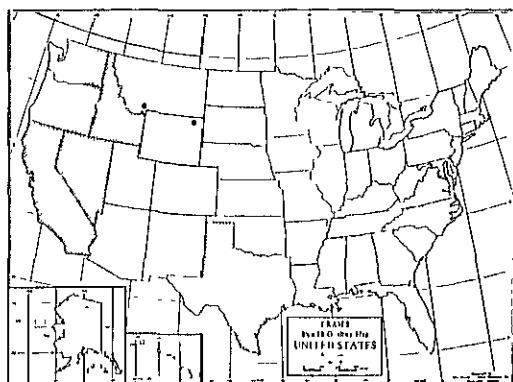
Amaranthus californicus (Moq.) S. Wats.

Family: Pigweed (Amaranthaceae)

July-October

Field Marks: This much branched species lies flat on the ground. Its flowers are in small, axillary clusters. Each female flower has only one sepal.





Local Notes:

Habitat: Moist mud or sand flats.

Habit: Mat-forming annual herb with a taproot.

Stems: Lying flat on the ground, much branched, forming mats up to 1 1/2 feet across, often tinged with red.

Leaves: Alternate, simple, spatulate to obovate, up to 3/4 inch long, pale green, often with a white border, smooth; leaf stalks slender, up to 3/4 inch long.

Flowers: Male and female flowers borne separately but on the same plant in small axillary clusters; bracts lanceolate, slender-tipped, about 1/24 inch long.

Sepals: 2 or 3 in the male flowers, free from each other, lanceolate, greenish; 1 in the female flower, about 1/24 inch long.

Petals: 0.

Stamens: 1-2.

Pistils: Ovary superior.

Fruits: Nearly spherical, red or purple, up to 1/16 inch in diameter; seeds round, red-brown.

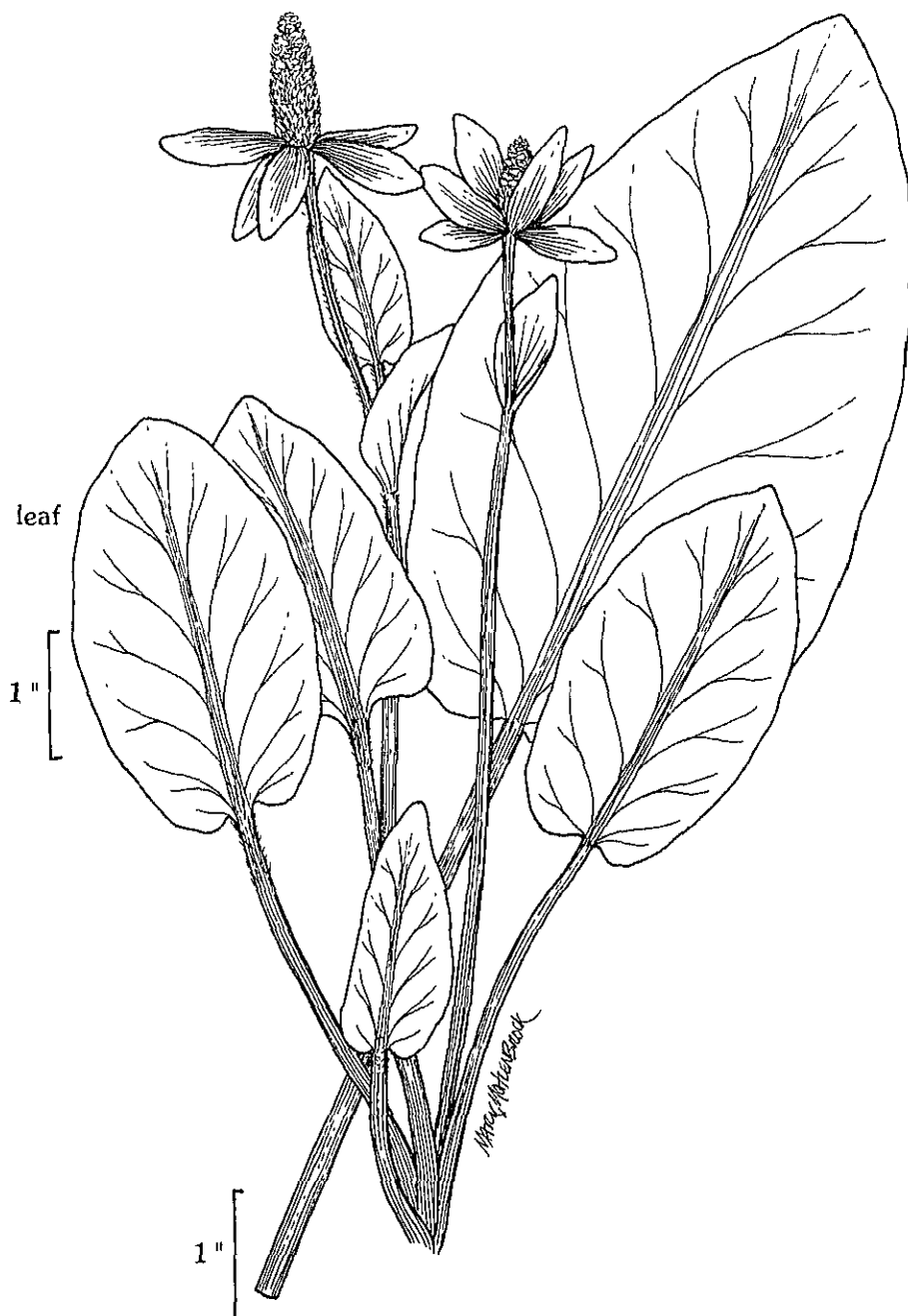
Yerba Mansa

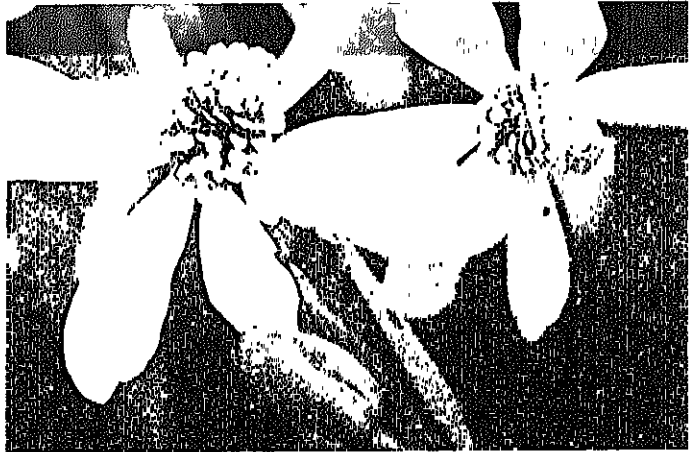
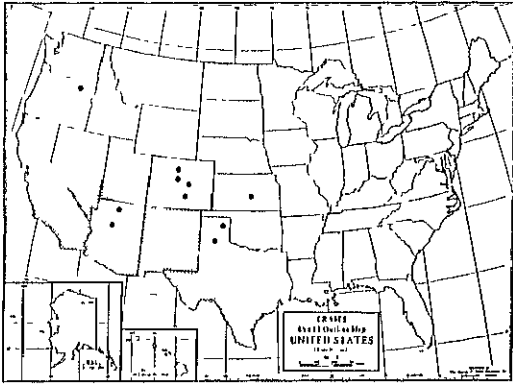
Anemopsis californica (Nutt.) Hook. & Arn.

Family: Lizard's-tail (Saururaceae)

March-September

Field Marks: This species has broad leaves that are heart-shaped at the base and an inflorescence up to 3 inches across made conspicuous by the presence of 4-8 white bracts.





Local Notes:

Habitat: Wet meadows, marshes, swamps, along streams, sometimes in alkaline areas.

Habit: Perennial herb with thick, creeping, aromatic rhizomes.

Stems: Upright, up to 1 1/2 feet tall, woolly, bearing a terminal group of flowers, one large leaf on the stem, and a few basal leaves.

Leaves: Basal leaves elliptic to oblong, up to 6 inches long, rounded at the tip, heart-shaped at the base, somewhat hairy, on stalks up to 6 inches long; one stem leaf ovate, pointed at the tip, clasping at the base, with 1-3 smaller leaves in the axil.

Flowers: Few, terminal in spikes, surrounded by 4-8 white, petal-like bracts up to 1 1/2 inches long, the entire structure up to 3 inches across.

Sepals: 0.

Petals: 0.

Stamens: 6 or 8.

Pistils: 3 or 4, free or united at the base, smooth, with the ovary superior.

Fruits: Capsules cone-like, rusty-colored, with numerous seeds.

Notes: Despite the absence of sepals and petals, this species has showy, anemone-like flowers because of the conspicuous white bracts.

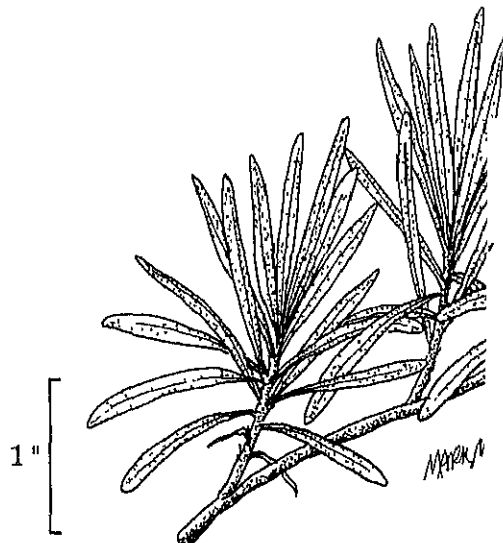
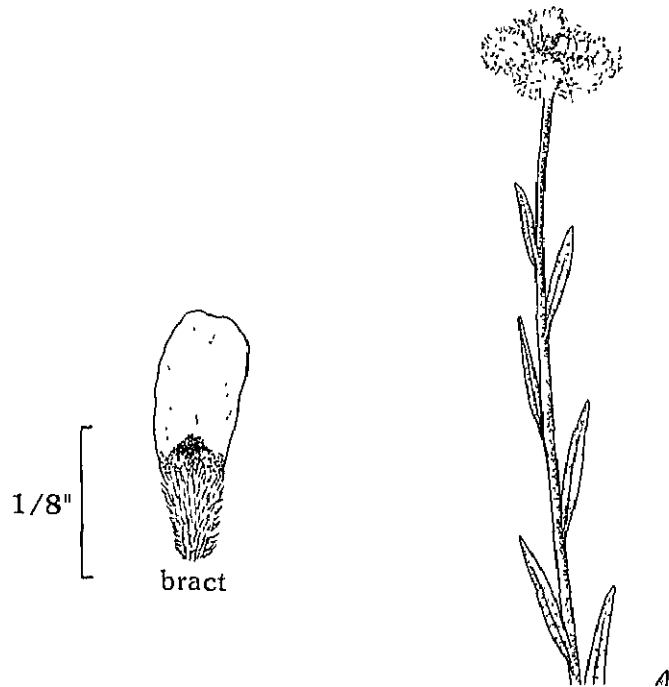
Flat-top Pussy-toes

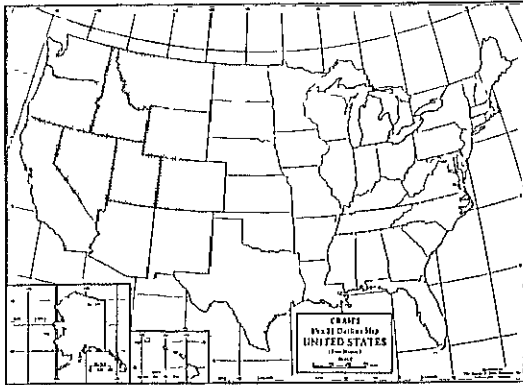
Antennaria corymbosa E. Nels.

Family: Composite (Compositae)

June-August

Field Marks: This species differs from all other pussy-toes by the conspicuous black spot near the middle of each bract in the flower head





Local Notes:

Habitat: Wet meadows in the mountains.

Habit: Perennial, mat-forming herb from a slender rootstock.

Stems: Both spreading stolons and upright stems present, up to 10 inches long, hairy.

Leaves: Basal and alternate on the stem, simple, oblanceolate to spatulate, up to 2 inches long, up to 1/4 inch wide, pointed at the tip, tapering to the base, hairy but greenish.

Flowers: Several crowded together into heads, the male and female flowers borne on separate plants; heads several in a terminal cluster, subtended by bracts; bracts woolly, with a conspicuous black spot near the middle.

Sepals: 0.

Petals: White, those of the male flowers united into thread-like rays, those of the female flowers united into a tube with 5 teeth.

Stamens: 5

Pistils: Ovary inferior; styles in the female flowers deeply 2-cleft.

Fruits: Achenes minutely hairy, topped by slender bristles.

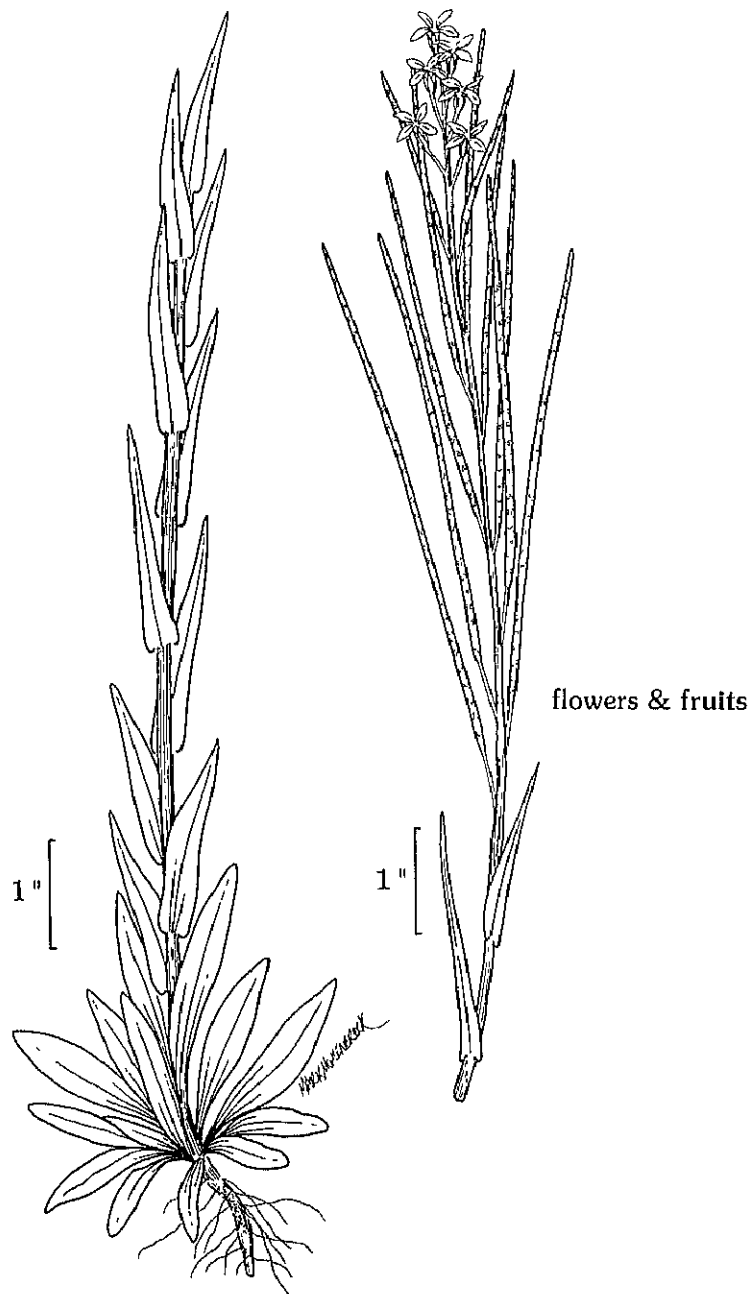
Drummond's Rockcress

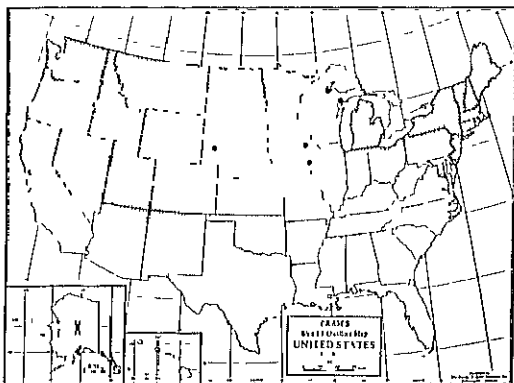
Arabis drummondii Gray

Family: Mustard (Cruciferae)

June-August

Field Marks: This rockcress has strictly erect, slender pods 2-5 inches long, toothed but not lobed basal leaves, and smooth or only slightly hairy stems





Local Notes:

Habitat: Rocky woods, moist slopes.

Habit: Biennial herb with a thickened rootstock.

Stems: Upright, branched or unbranched, up to 2 feet tall, smooth or only slightly hairy, sometimes glaucous.

Leaves: Both cauline and basal, linear-lanceolate to oblanceolate, pointed at the tip, tapering to the base, up to 3 inches long, smooth or sparsely hairy, often toothed, the basal leaves with stalks, the cauline leaves sessile and sometimes clasping.

Flowers: Several in a terminal cluster, each on a smooth stalk up to 1 inch long.

Sepals: 4, green, free from each other, up to 1/4 inch long.

Petals: 4, white, rarely pinkish, free from each other, 1/4-1/2 inch long.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Pods numerous, crowded, strictly erect, 2-5 inches long; seeds oblongoid, winged at each end.

Notes: The seeds are eaten by small mammals.

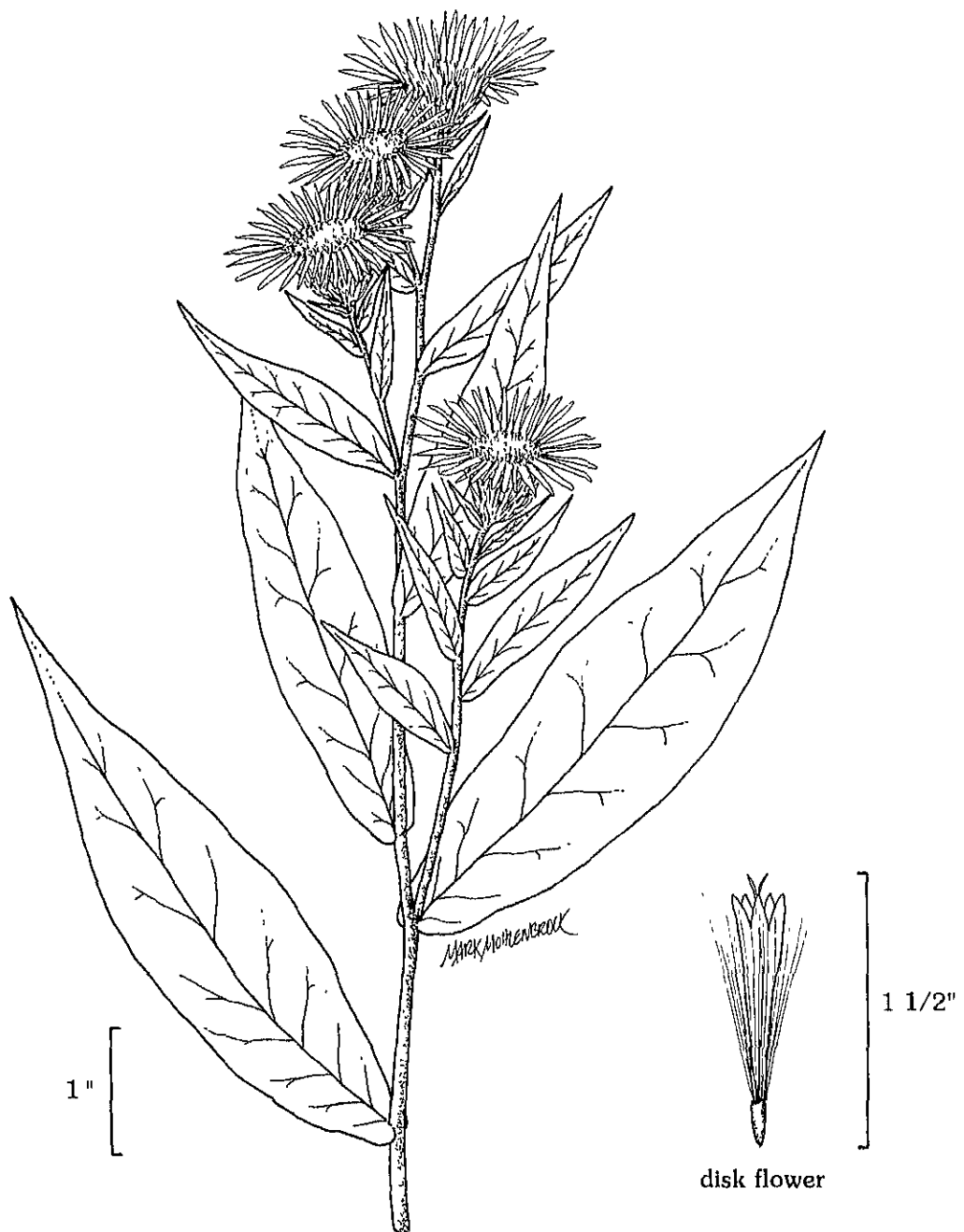
Common California Aster

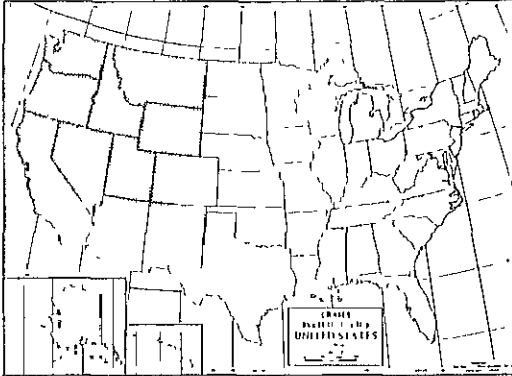
Aster chilensis Nees

Family: Composite (Compositae)

June-October

Field Marks: There are many violet, blue, or white flower heads 1/2-1 inch across, borne in leafy panicles. The bracts that subtend each flower head are ciliate and have a green tip.





Local Notes:

Habitat: Moist or dry fields, along streams.

Habit: Perennial herb with a thickened rootstock.

Stems: Upright, branched, up to 3 feet tall, usually hairy.

Leaves: Lowest leaves obovate to oblanceolate, up to 5 inches long, up to 1 1/2 inches wide, pointed at the tip, tapering to a sessile or clasping base or to a winged stalk, rough on the upper surface and edges, toothed or untoothed; middle leaves lanceolate to linear-lanceolate, up to 3 1/2 inches long, up to 1 inch wide, sessile, rough to the touch, with or without teeth.

Flowers: Many borne in heads 1/2-1 inch across, the heads borne in leafy panicles; each head subtended by bracts 1/4-1/3 inch long, narrowly oblong, whitish with a green tip, ciliate.

Sepals: 0.

Petals: 5, some of them united to form 20-35 violet, blue, or white rays up to 1/2 inch long, others united to form yellow tubular flowers that form a central disk.

Stamens: 5.

Pistils: Ovary inferior, hairy.

Fruits: Achenes oblanceoloid, hairy, with soft white bristles at the tip.

Notes: The achenes are eaten by birds.

Siskiyou Aster

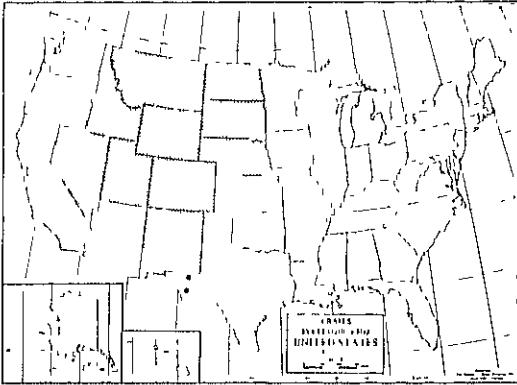
Aster hesperius Gray

Family: Composite (Compositae)

August-October

Field Marks: This Aster is distinguished by its flower heads up to 1 1/4 inches across with white or bluish purple rays, its purple-tipped bracts, and its stems with hairiness in lines below the base of each leaf.





Local Notes:



Habitat: Along streams, in wet meadows.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, usually branched, up to 6 feet tall, smooth except for lines of hairs below the base of each leaf.

Leaves: Alternate, simple, linear-lanceolate, up to 6 inches long, up to 3/4 inch wide, pointed at the tip, tapering to the base, the uppermost usually without teeth, the lowermost usually toothed, rough to the touch, ciliate along the edges.

Flowers: Many united into heads up to 1 1/4 inches across, each head with 20-35 white or bluish purple ray flowers and several short yellow tubular flowers forming a disk; bracts subtending each head linear, ciliate.

Sepals: 0.

Petals: 5, some of them united to form rays, others united to form tubes comprising the central disk.

Stamens: 5.

Pistils: Ovary inferior, slightly hairy.

Fruits: Achenes elongated, slightly hairy, up to 1/24 inch long, with a tuft of white or tawny hairs at the tip.

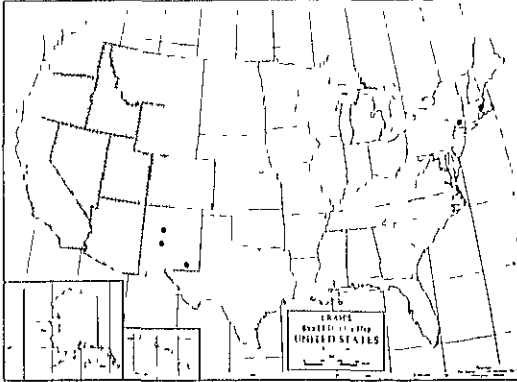
Notes: The achenes may be eaten by birds.

Bassia hyssopifolia (Pallas) Kuntze

July-September

A detailed botanical line drawing of a plant branch. The branch is slender and has several smaller, thinner branches extending from it. The leaves are small, narrow, and pointed, arranged alternately along the stems. The inflorescence is a dense, elongated cluster of small flowers or fruits at the tip of the main branch and on the smaller branches. A vertical scale bar on the left is labeled '1"'. The signature 'M. H. S. W. H. S. W. H. S. W.' is written in cursive at the bottom left. A small number '9' is located at the bottom right.

10



Local Notes:

Habitat: Alkaline flats

Habit: Annual herb with fibrous roots

Stems: Usually upright, much branched, up to 8 inches tall, smooth or hairy

Leaves: Alternate, simple, linear to linear-lanceolate, up to 1 3/4 inches long, pointed at the tip, tapering to the base, hairy, without teeth

Flowers: Several crowded into terminal or axillary spikes.

Sepals: 5, green, united below, hairy, each lobe about 1/16 inch long, with a short, hooked spine at or near the tip.

Petals: 0.

Stamens: 5.

Pistils: Ovary superior; stigmas 2.

Fruits: Flattened, brown to black, up to 1/12 inch across, enclosed by the enlarged, hairy sepals

Slender-sepal Marsh-marigold

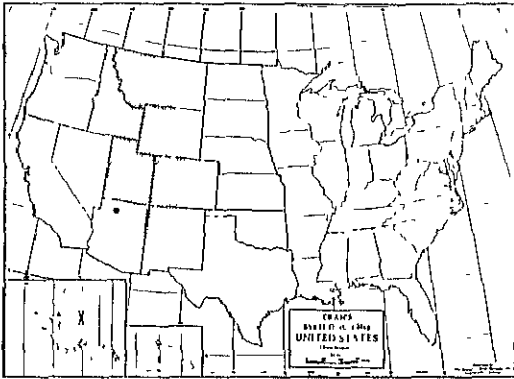
Caltha leptosepala DC.

Family: Butter-cup (Ranunculaceae)

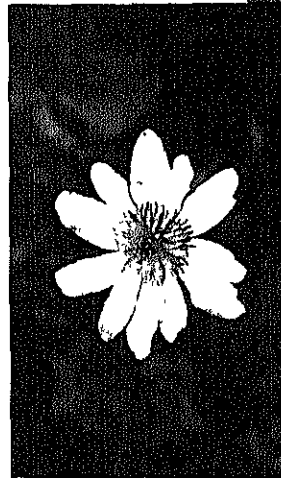
June-August

Field Marks: This species is identified by its large white 1 or 2 flowers and its undivided heart-shaped single leaves.





Local Notes:



Habitat: Wet meadows and bogs in the mountains.

Habit: Perennial herb with thick fibrous roots.

Stems: Upright, either bearing no leaves and one flower or 1 leaf and 2 flowers, up to 10 inches tall, smooth, somewhat succulent.

Leaves: Basal or with only one on the stem, ovate to orbicular, up to 3 inches long, rounded at the tip, deeply heart-shaped at the base, regularly toothed, smooth, on stalks.

Flowers: Solitary or in pairs, up to 2 1/2 inches across, white.

Sepals: 6-12, white, petal-like, free from each other, up to 1 inch long.

Petals: 0.

Stamens: Numerous.

Pistils: Many, each with a superior ovary.

Fruits: Follicles several, up to 1/2 inch long, containing very many seeds

Notes: This plant begins to flower after the first thaw in the spring. There is a report of this species from California.

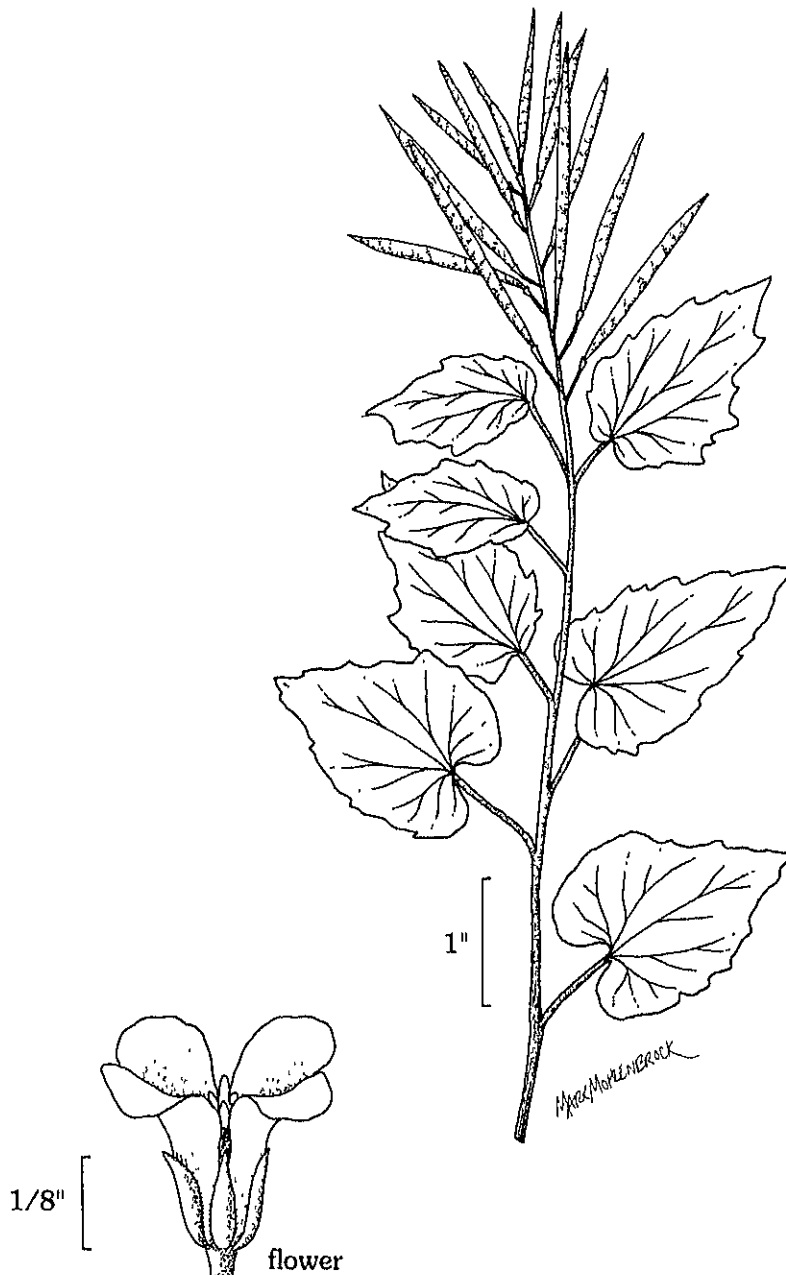
Cardamine cordifolia Gray

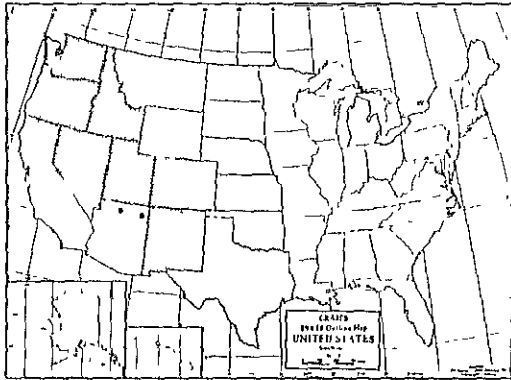
Cardamine cordifolia Gray

Family: Mustard (Cruciferae)

June-August

Field Marks: This species of bitter-cress differs from all others by its simple leaves that are heart-shaped at the base with wavy edges





Local Notes:



Habitat: Along streams, in fens.

Habit: Perennial herb from a slender rootstock

Stems: Upright, up to 1 1/2 feet tall, smooth or with some soft hairs.

Leaves: Alternate, simple, ovate to nearly round, up to 3 inches long, often nearly as broad, pointed or rounded at the tip, heart-shaped at the base, smooth or with soft hairs, wavy or toothed along the edges, on slender stalks.

Flowers: Several in dense racemes, each flower on a slender, spreading stalk up to 3/4 inch long

Sepals: 4, green, free from each other, about 1/8 inch long.

Petals: 4, white, free from each other, about 1/3 inch long.

Stamens: 6.

Pistils: Ovary superior

Fruits: Pods elongated, very narrow, up to 1 1/2 inches long, about 1/20 inch wide, containing 8-12 seeds.

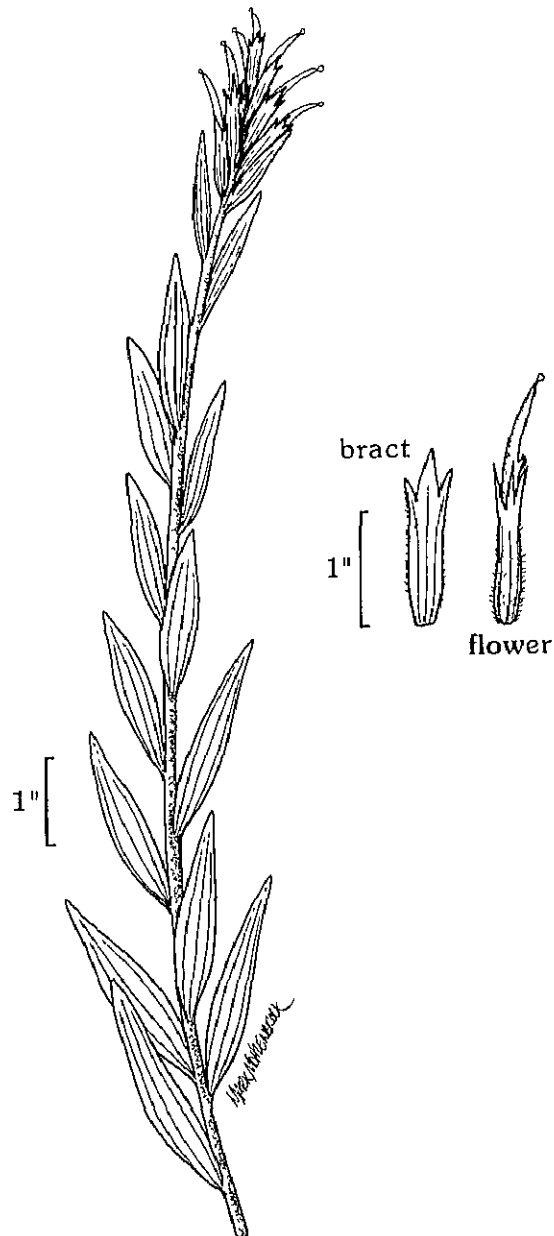
Scarlet Indian-paintbrush

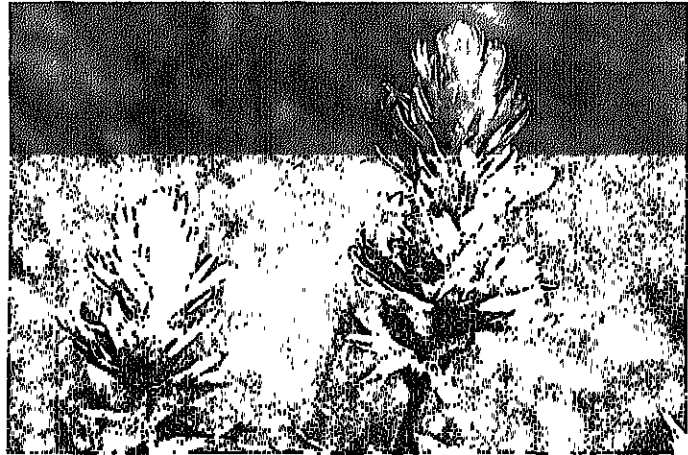
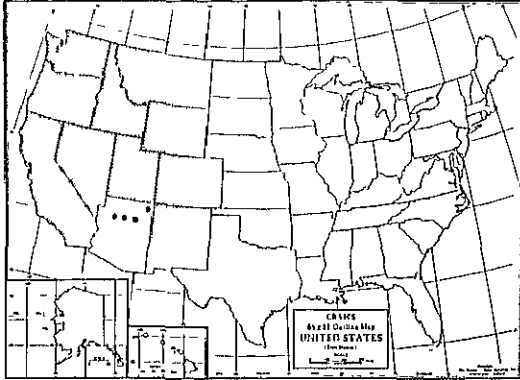
Castilleja miniata Dougl. ex Hook.

Family: Figwort (Scrophulariaceae)

May-September

Field Marks: This showy species has bright scarlet bracts that subtend the 1-1 1/2 inch long petals. The lower lip of the petals is only about 1/12 inch long





Local Notes:

Habitat: Along streams, wet meadows, thickets, forest openings.

Habit: Perennial herb with thickened rootstocks.

Stems: Upright, branched or unbranched, up to 2 1/2 feet tall, smooth or somewhat hairy.

Leaves: Alternate, simple, lanceolate, up to 2 1/2 inches long, up to 3/4 inch wide, without teeth, or the uppermost leaves with a pair of lobes, smooth or somewhat hairy.

Flowers: Crowded together in a spike, each flower subtended by a scarlet bract; uppermost bracts with a pair of lobes.

Sepals: 4, united into a cleft tube, usually scarlet, up to 1 1/4 inches long.

Petals: 5, greenish with red edges, united below into a tube, up to 1 1/2 inches long, 2-lipped, the upper lip as long as the tube, the lower lip about 1/12 inch long.

Stamens: 4.

Pistils: Ovary superior.

Fruits: Capsules ovoid, about 1/2 inch long.

Notes: The color of the bracts may sometimes be orange or red-purple.

American Wormseed

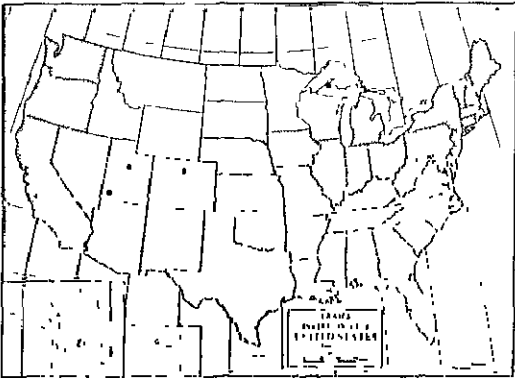
Chenopodium ambrosioides L.

Family: Goosefoot (Chenopodiaceae)

June-December

Field Marks: This species is readily recognized by its strong-scented stems and leaves, the interrupted spikes of flowers, and the gland-dotted sepals.





Local Notes:

Habitat: Old fields, disturbed areas, particularly in low, moist areas.

Habit: Annual or perennial herb with a taproot.

Stems: Upright, much branched, up to 3 feet tall, glandular-hairy or nearly smooth, strongly scented.

Leaves: Alternate, simple, lanceolate to oblong, up to 4 inches long, pointed at the tip, shallowly or coarsely toothed or not toothed at all, glandular-hairy or nearly smooth, strongly scented.

Flowers: Many crowded into elongated or spherical spikes; spikes often interrupted, usually without bracts.

Sepals: 5, green, united below, about 1/20 inch long, gland-dotted.

Petals: 0.

Stamens: 5.

Pistils: Ovary superior; stigmas 2.

Fruits: Flattened, enclosed by the sepals, 1-seeded; seed spherical, about 1/36 inch in diameter, dark brown.

Notes: This species is native to tropical America. The plant has been used in the past medicinally.

Coast-blite Goosefoot

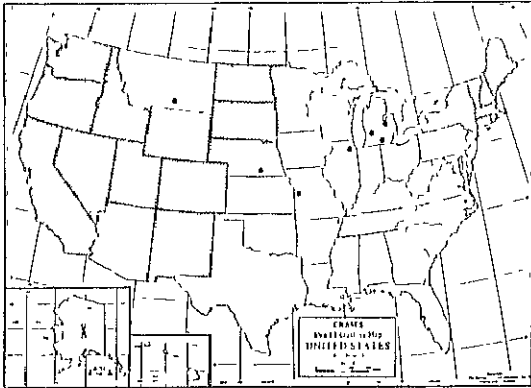
Chenopodium rubrum L.

Family: Goosefoot (Chenopodiaceae)

June-September

Field Marks: The smooth red or red-tinged leaves, the 3 sepals, and the usually alkaline habitat readily distinguish this species from all others.





Local Notes:

Habitat: Salt marshes, alkaline areas.

Habit: Annual herb with a taproot.

Stems: Upright or lying flat, branched or unbranched, up to 3 feet long, smooth.

Leaves: Alternate, simple, ovate to oblong, up to 5 inches long, usually nearly as wide, pointed at the tip, tapering to the base, the lowest coarsely jagged toothed and stalked, the upper without teeth and sessile, red or red-tinged, smooth.

Flowers: Crowded into spikes forming a panicle.

Sepals: 3, green, united at the base, up to 1/16 inch long.

Petals: 0

Stamens: Usually 5.

Pistils: Ovary superior.

Fruits: Minute, spherical, about 1/20 inch in diameter, smooth, the seeds dark brown and shiny.

Notes: The seeds of this plant are eaten by rodents and other small mammals.

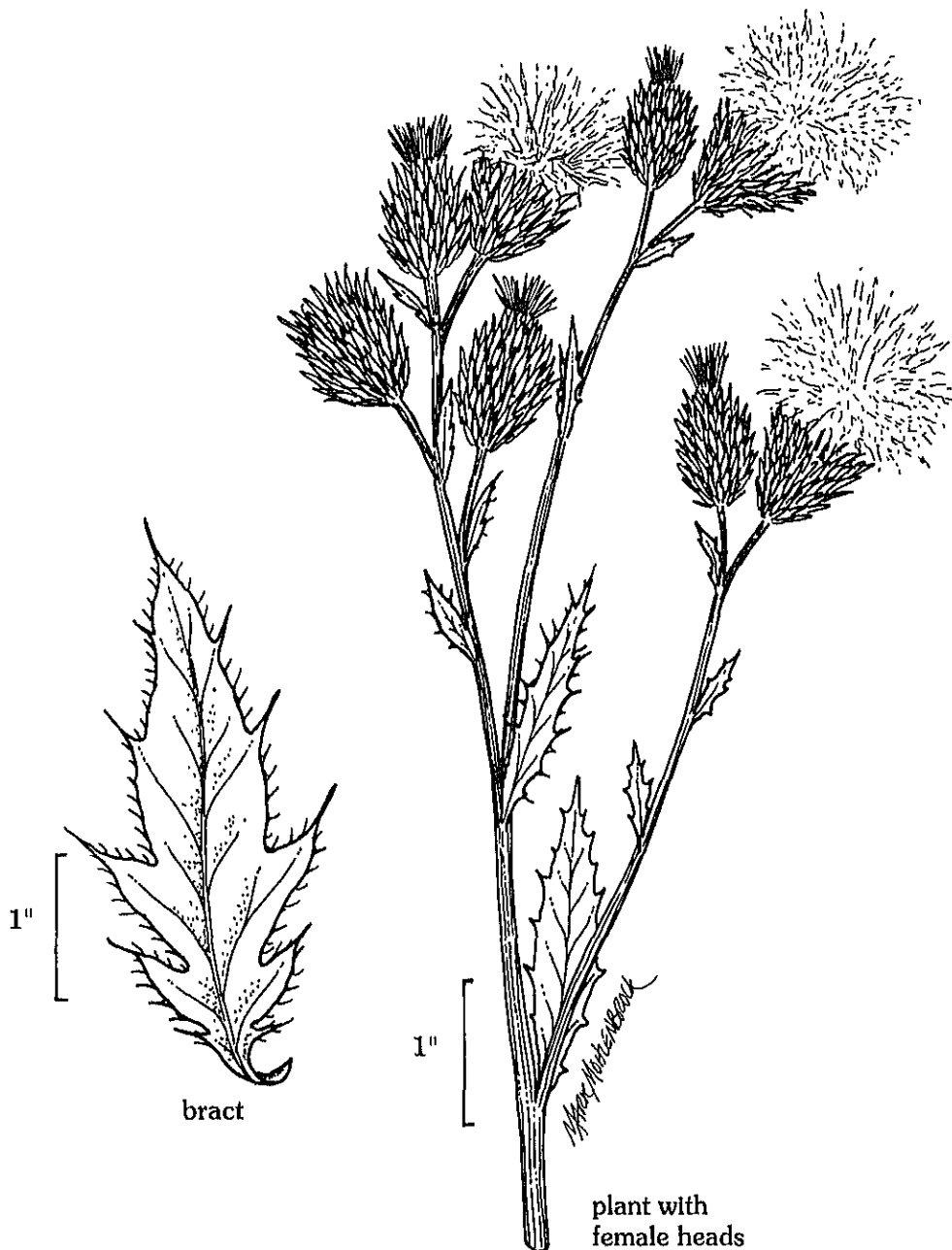
Creeping Thistle

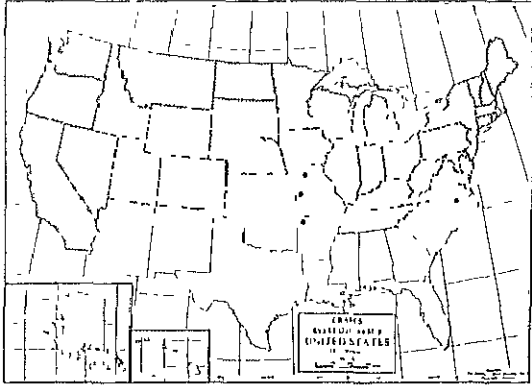
Cirsium arvense (L.) Scop.

Family: Composite (Compositae)

June-August

Field Marks: This thistle can be distinguished usually by its small flower heads that are usually less than 1 inch long and 1/2 inch wide





Local Notes:

Habitat: Bottomland areas, ditches, old fields, disturbed areas.

Habit: Perennial herb from a thickened, deep rootstock.

Stems: Upright, branched, up to 4 feet tall, usually covered with white, cobwebby hairs

Leaves: Alternate, simple, usually pinnately lobed, up to 6 inches long, up to 3 inches wide, smooth or white-hairy, the lobes bearing sharp spines; leaf stalk up to 1/2 inch long or absent.

Flowers: Many crowded together into a head, with several heads per plant; each head less than 1 inch long, less than 1/2 inch across, subtended by 5-6 rows of small spine-tipped, green bracts; flowers all tubular.

Sepals: 0.

Petals: 5, pink or purple, forming a tube up to 1 inch long.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes pale brown, topped by a cluster of white or gray plumose bristles up to 1 inch long.

Notes: The female and male flowers are usually borne in separate heads on separate plants.

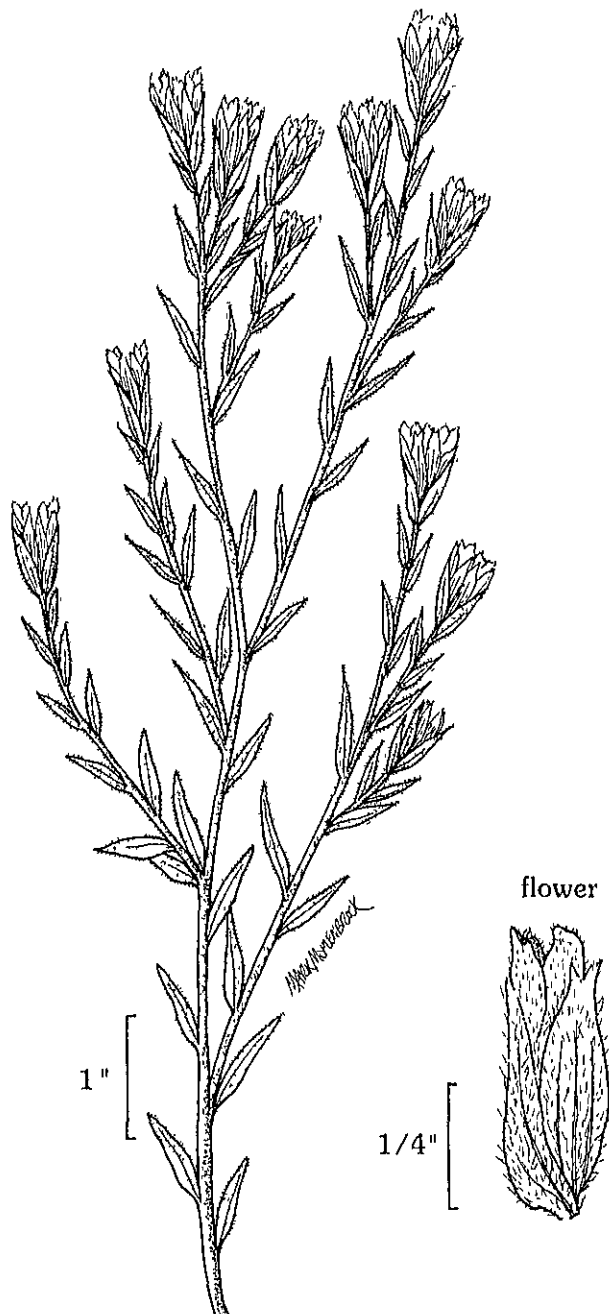
Saltmarsh Bird's-beak

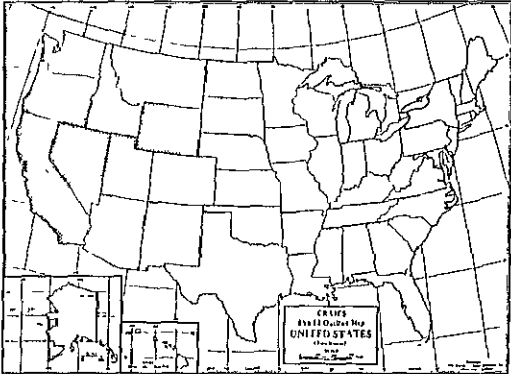
Cordylanthus maritimus Nutt. ex Benth.

Family: Figwort (Scrophulariaceae)

June-August

Field Marks: This species differs from all others in the genus by its simple leaves, by its bracts which are toothless or have only shallow lobes, and by the petals shorter than the sepals





Local Notes:



Habitat: Salt marshes, alkaline meadows, hot springs.

Habit: Annual herb with yellow roots.

Stems: Upright or spreading, much branched, up to 20 inches tall, sticky-hairy to nearly smooth.

Leaves: Alternate, simple, oblong, narrowly lanceolate to lanceolate, up to 1 inch long, pointed at the tip, tapering to the base, bluish green, hairy or occasionally nearly smooth, usually without teeth.

Flowers: Crowded in terminal spikes, the flowers subtended by bracts that appear sepal-like; bracts without teeth or only shallowly lobed, narrowly oblong, bluish green, up to 1 inch long.

Sepals: United to form a single structure split nearly to the base, 1/2-1 inch long, green, notched at the tip.

Petals: 5, united to form 2 lips, 3/4-1 inch across, white or yellow, striped with purple or red, and tipped with yellow, pink, or purple, minutely hairy on the back.

Stamens: 4, attached to the petals, the anthers with a tuft of hairs at the base.

Pistils: Ovary superior.

Fruits: Capsules ellipsoid, 1/3-1/2 inch long; seeds up to 1/16 inch long, curved, brown.

Notes: The increasing rarity of this species along the coast has necessitated it being listed as a Federally endangered species. The plants that occur in the great Basin (var. *canescens*), which have usually toothless bracts and capsules with more seeds, are more common and are not Federally listed.

Cotula coronopifolia L.

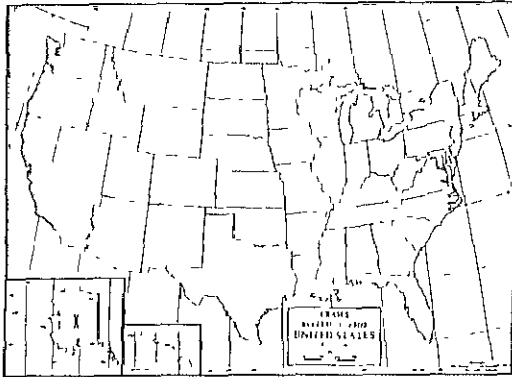
March-December

1"

Microglossa

1/8"

disk flower



Local Notes:



Habitat: Salt marshes, along streams, often in mud.

Habit: Perennial herb, rooting at the lower nodes.

Stems: Ascending to spreading, rather fleshy, branched, up to 1 foot long, smooth.

Leaves: Alternate, simple but usually pinnately lobed, linear to oblong, up to 3 inches long, smooth, sessile or even slightly clasping at the base.

Flowers: Borne in heads, with usually 1 head from the axils of the uppermost leaves, the head up to 1/2 inch across, bright yellow, consisting only of disk flowers; bracts oblong, with 3-5 veins.

Sepals: 0.

Petals: 4, bright yellow, united to form tubular disk flowers.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Achenes winged or unwinged, up to 1/10 inch long, without a tuft of soft bristles at the tip.

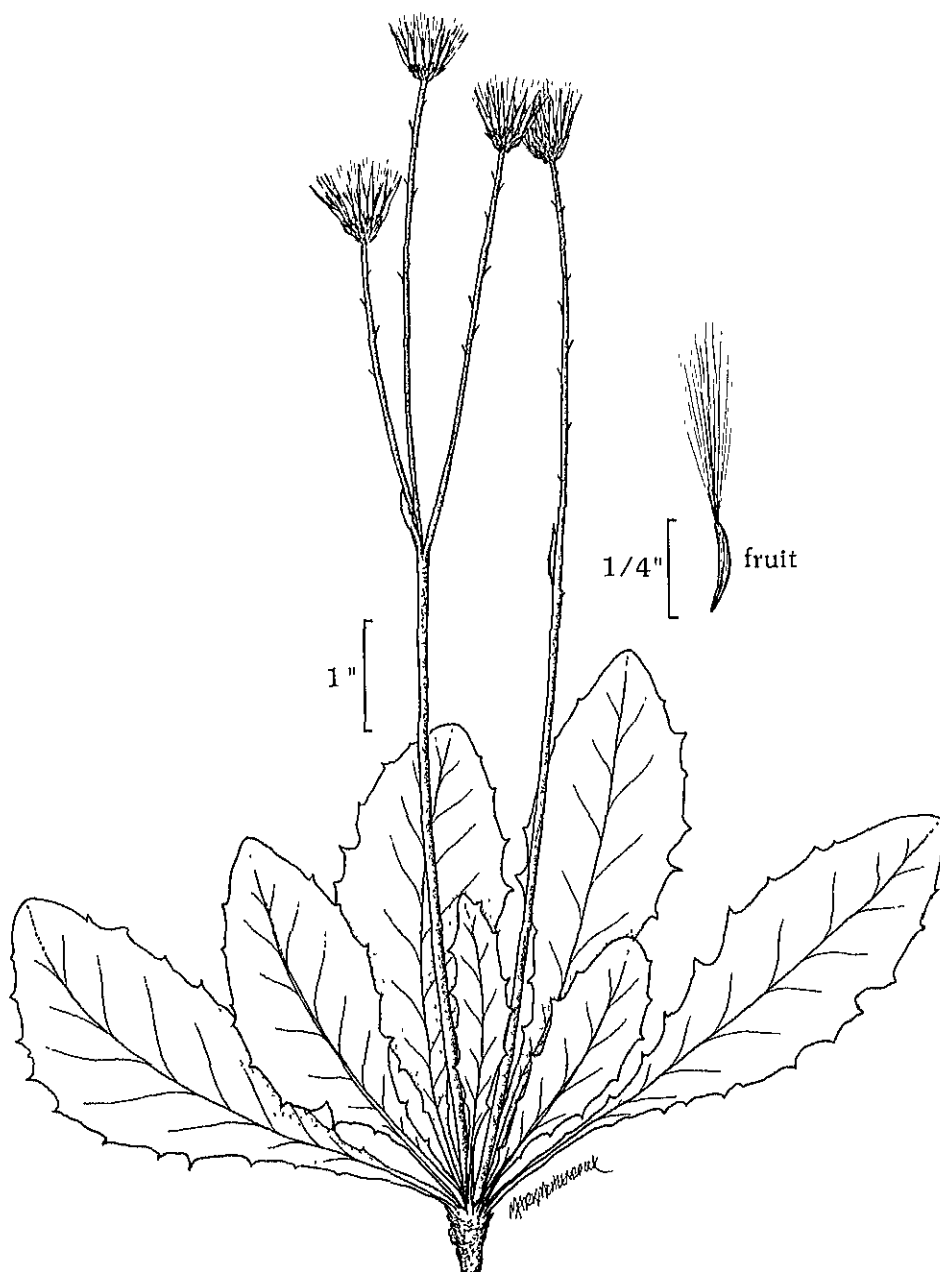
Dandelion Hawksbeard

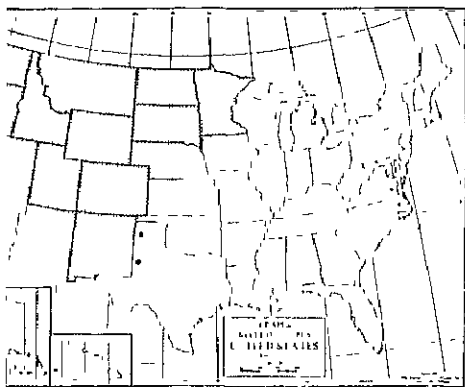
Crepis runcinata (James) Torr. & Gray

Family: Composite (Compositae)

June-July

Field Marks: This species has all leaves basal and leaves and stems that are smooth or sparsely hairy, but never with short, curly, matted hairs.





Notes:

Habitat: Alkaline meadows.

Habit: Perennial herb with a thickened, fleshy rootstock.

Stem: Upright, smooth or sometimes hairy but not with curly, matted hairs, up to 1 1/2 feet tall, bearing only the flower heads and a few bracts; milky sap present.

Leaves: All basal, oblong to obovate, up to 10 inches long, up to 3 inches wide, rounded at the tip, tapering or abruptly contracted to the leaf stalk, smooth or somewhat hairy, but not with curly, matted hairs, toothed along the edges.

Flowers: Many borne in heads on a leafless stem, the heads up to 1 inch high, consisting entirely of ray flowers; bracts surrounding each head narrowly lanceolate, pointed at the tip, usually glandular-hairy.

Sepals: 0.

Petals: 5, orange, united to form rays 1/2-3/4 inch long.

Stamens: 5

Pistils: Ovary inferior.

Fruits: Achenes 1/4-1/3 inch long, tapering to a short point at the tip, pale brown to dark brown, with at least 10 ribs, topped by a cluster of fine bristles.

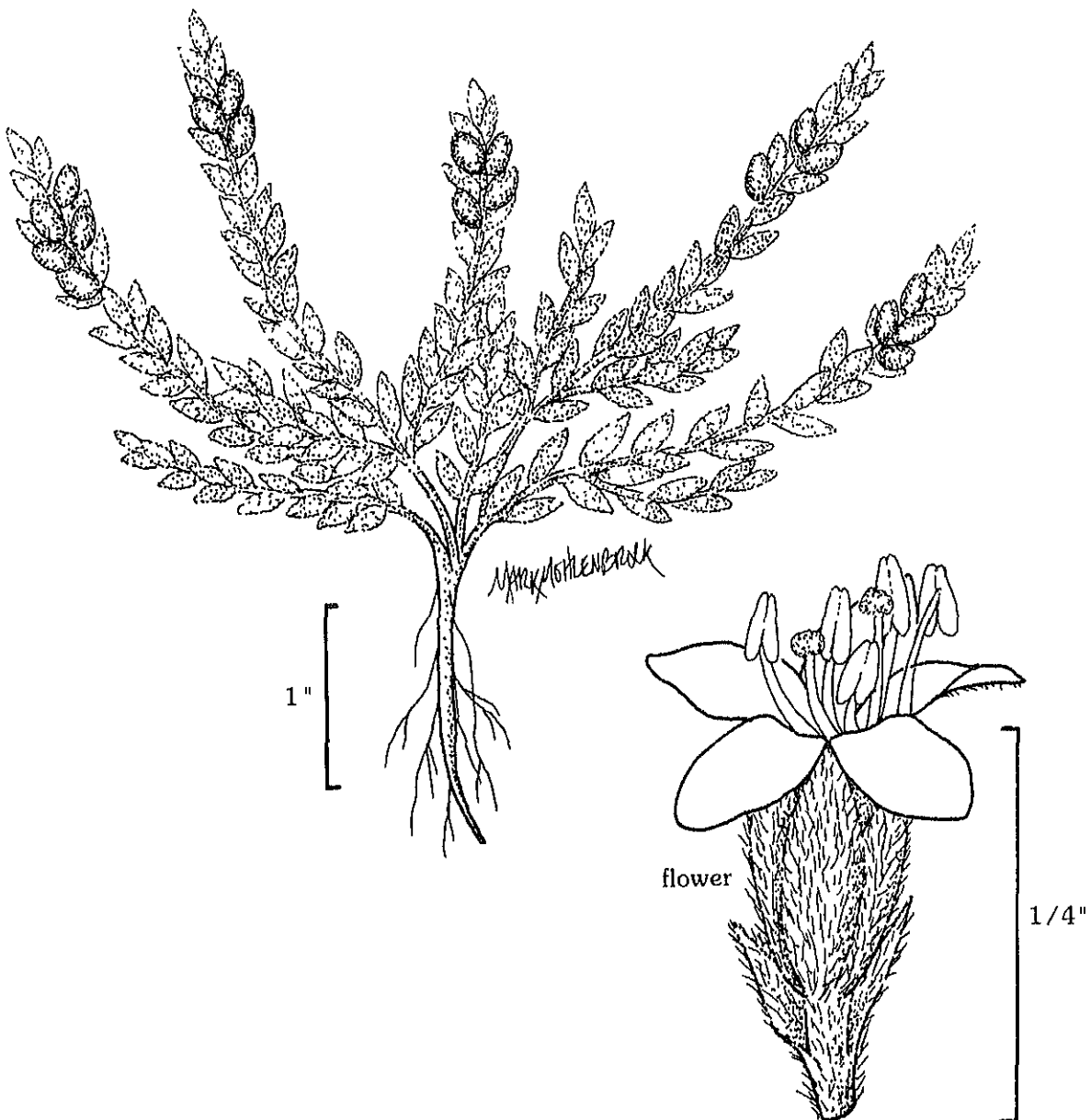
Spreading Alkali-weed

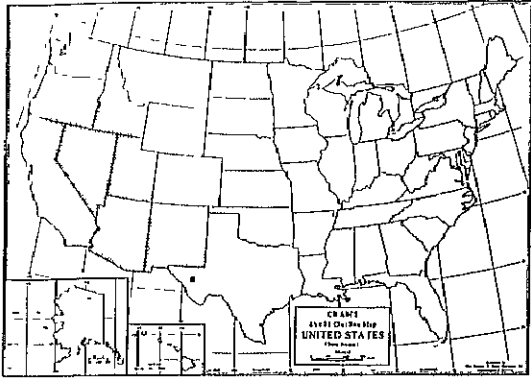
Cressa truxillensis HBK.

Family: Morning-glory (Convolvulaceae)

May-October

Field Marks: This gray-hairy, usually sprawling, herb has solitary white flowers borne in the axils of the upper leaves, with the petals and sepals about the same length.





Local Notes:

Habitat: Moist alkaline and salty habitats.

Habit: Perennial herb with a slender taproot.

Stems: Upright or lying flat, much branched, gray-hairy, up to 8 inches long.

Leaves: Alternate, simple, oblong to ovate, up to 1/2 inch long, up to 1/3 inch wide, rounded or somewhat pointed at the tip, tapering to the usually sessile base, gray-hairy, without teeth.

Flowers: Solitary in the axils of the upper leaves, subtended by bracteoles; stalks very short to 1/3 inch long.

Sepals: 5, green, united below, hairy, 1/6-1/4 inch long, the lobes ovate.

Petals: 5, white, united below into a short tube 1/6-1/4 inch long, the lobes shorter, ovate, spreading or turned downward.

Stamens: 5, exserted beyond the petals.

Pistils: Ovary superior, hairy; styles 2.

Fruits: Capsules ovoid, 1/4-1/3 inch long, hairy, usually 1-seeded; seed ovoid, dull brown.

Notes: This is a highly variable species with some plants upright and others lying on the ground.

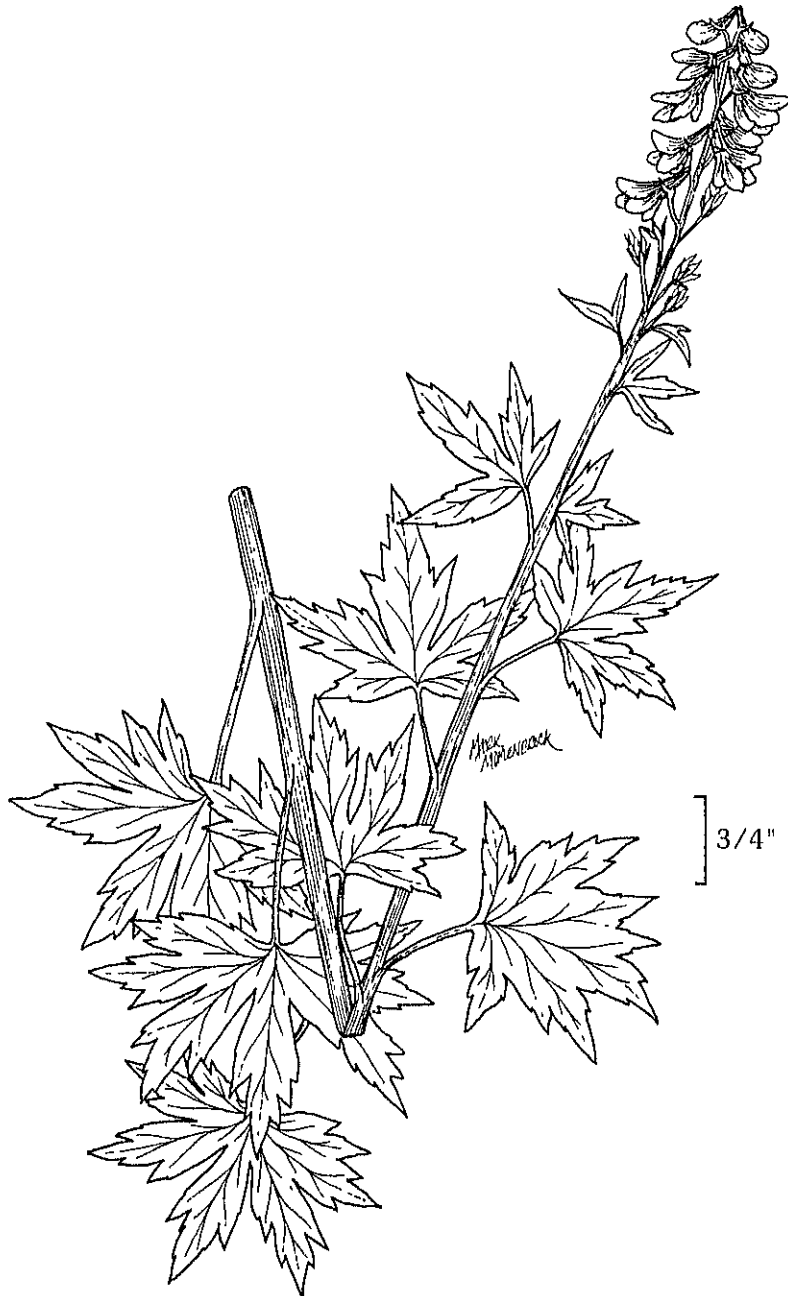
Tower Larkspur

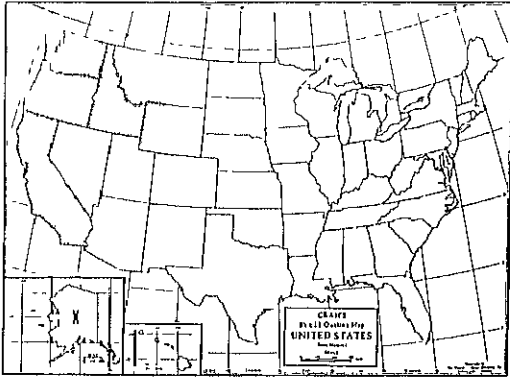
Delphinium glaucum S. Wats.

Family: Butter-cup (Ranunculaceae)

July-September

Field Marks: This perennial larkspur has violet-purple sepals that are up to 1/2 inch long. The smooth, glaucous stems are hollow and tend to be woody at the base. They may be 3-7 feet tall.





Local Notes:



Habitat: Wet meadows, along streams.

Habit: Perennial herb with a stout, woody rootstock.

Stems: Coarse, upright, hollow, branched, up to 7 feet tall, woody at the base, smooth, glaucous.

Leaves: Alternate, up to 8 inches across, palmately divided into several segments, the segments lobed or toothed, smooth or hairy.

Flowers: Many in racemes up to 1 1/2 feet long; flower stalks up to 2 inches long, upper bracts leafy.

Sepals: 5, violet-purple, up to 1/2 inch long, minutely hairy, one of them prolonged backward into a spur, the spur 1/3-1/2 inch long.

Petals: 4, 2 of them larger than the other 2, narrow, oblong, notched and purple at the tip.

Stamens: Numerous.

Pistils: 1-5, each with a superior ovary.

Fruits: Follicles 1-5, smooth or minutely hairy, upright, 1/2-3/4 inch long; seeds ovoid, straw-colored, up to 1/8 inch long.

Dodecatheon pauciflorum Greene

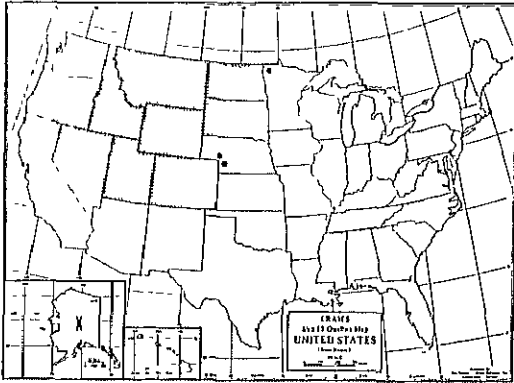
May-July

1"

3/4"

fruit

APR 1904 MUSEUM



Local Notes:



Habitat: Wet meadows.

Habit: Perennial herb with a short crown and fleshy roots.

Stems: Underground as a short crown.

Leaves: All basal, oblanceolate to elliptic, up to 8 inches long, rounded or pointed at the tip, tapering to a short stalk, without teeth, or sometimes with a wavy edge, smooth.

Flowers: 5-15 per stem, nodding, the cluster subtended by very small bracts.

Sepals: 5, green, united below, the tube up to 1/6 inch long, the lobes longer than the tube.

Petals: 5, united at the base, turned backward, purple, up to 3/4 inch long.

Stamens: 5.

Pistils: Ovary superior.

Fruits: Capsule oblong-ovoid, smooth, up to 3/4 inch long.

Notes: This species is often combined with *D. pulchellum*.

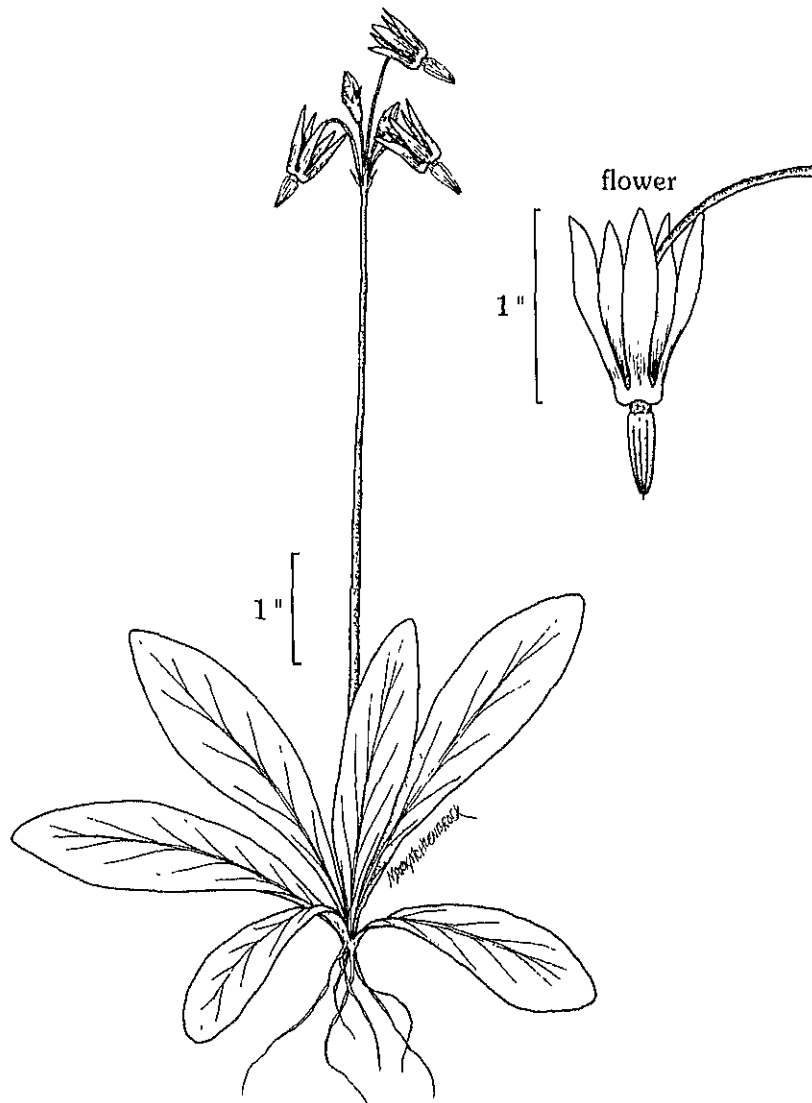
Few-flower Shooting-star

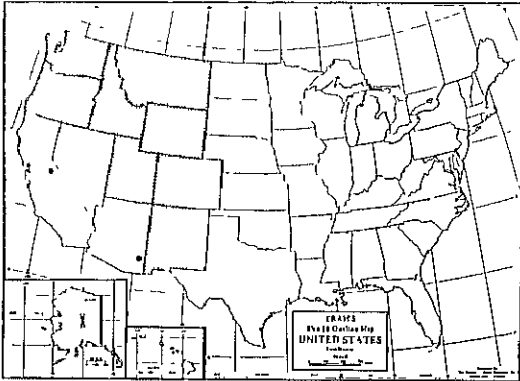
Dodecatheon pulchellum (Raf) Merrill

Family: Primrose (Primulaceae)

April-May

Field Marks: This shooting-star is distinguished by its pink or purple petals, its leaves that taper to the leaf stalk, and usually smooth stems and leaves





Local Notes:

Habitat: Wet meadows, swamps, fens, from sea level to the mountains.

Habit: Perennial herb with white roots

Stems: Upright, unbranched, up to 1 1/2 feet tall, smooth, bearing only flowers.

Leaves: All basal, ovate to oblanceolate, up to 10 inches long, up to 3 inches wide, tapering to the leaf stalk, smooth, usually without teeth

Flowers: 3-25 in terminal umbels on a leafless stem.

Sepals: 5, green, united to form a tube up to 1/6 inch long.

Petals: 5, pink or purple, with a dark center, turned backward, united below, up to 1 inch long.

Stamens: 5, the filaments united to form a greenish, yellowish, or maroon tube

Pistils: Ovary superior, smooth.

Fruits: Capsules lanceoloid, up to 3/4 inch long, smooth.

Notes: There is variation in flower color and size of plants.

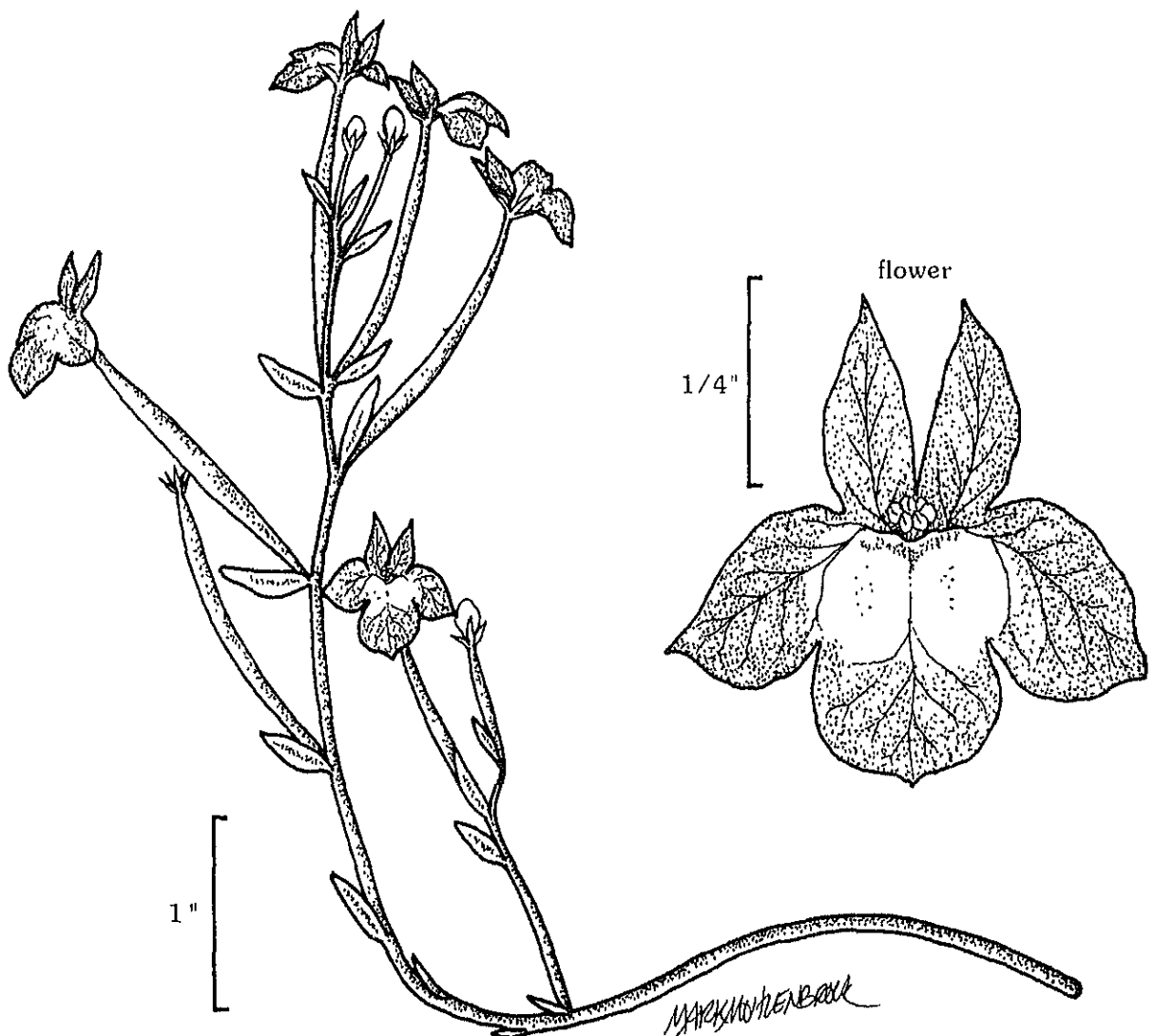
Double-horn Downingia

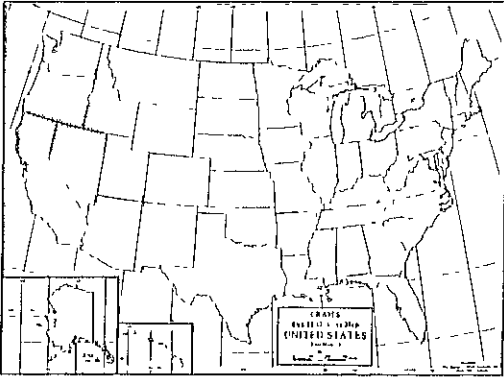
Downingia bicornuta Gray

Family: Bellflower (Campanulaceae)

April-July

Field Marks: The 2-lipped flowers of *Downingia* species are borne in the axils of the reduced uppermost leaves (bracts). The 5 stamens are united by their anthers and filaments. This species differs from others in the genus by the flower that is more than 1/2 inch across, by the 2 purple projections at the base of the middle petal of the lower lip, and the bristles at the tips of the anthers that twist around each other.





Local Notes:

Habitat: Edge of ponds, along streams, in roadside ditches, wet depressions.

Habit: Annual herb with fibrous roots.

Stems: Upright to ascending or even sprawling, branched or unbranched, hollow, up to 10 inches tall, smooth.

Leaves: Alternate, simple, narrowly lanceolate, up to 1 inch long, pointed at the tip, tapering to the base, smooth, without teeth.

Flowers: Borne singly in the axils of the uppermost reduced leaves (bracts), the bracts green, narrowly lanceolate, up to 3/4 inch long; flowers sessile, but appearing to be stalked because of the very slender floral tube.

Sepals: 5, green, united below to form a slender floral tube, the lobes 1/6 to 1/4 inch long, narrowly lanceolate, smooth.

Petals: 5, united to form 2 lips, 1/2-3/4 inch long, the upper lip darker blue than the lower, the lower lip paler blue with two large yellow or green blotches outlined in white or yellow, with 2 purple projections at the base of the middle petal.

Stamens: 5, not attached to the petals, with the filaments and anthers united, the anthers bearing 2 bristles at the tip that twist around each other.

Pistils: Ovary inferior, borne at the base of the slender floral tube.

Fruits: Capsules linear, terete, up to 3 inches long, smooth or with some stiff short hairs, twisted below, opening by means of vertical slits; seeds up to 1/24 inch long, pale brown with dark brown tips.

Downingia laeta (Greene) Greene

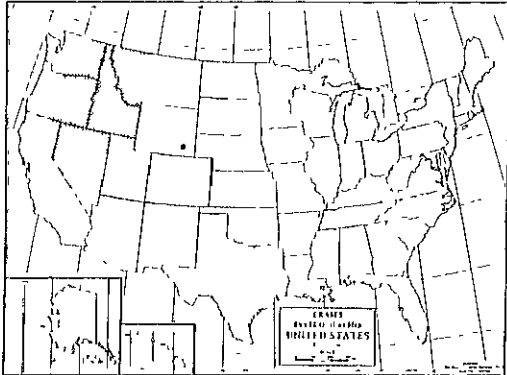
May-August

1"

Marckia mollis (L.) Kuntze

1/3"

flower



Local Notes:

Habitat: Vernal pools, edge of ponds and lakes, in roadside ditches.

Habit: Annual herb with fibrous roots.

Stems: Upright to ascending or even spreading, unbranched, hollow, up to 8 inches tall, smooth.

Leaves: Alternate, simple, narrowly lanceolate, up to 1 inch long, up to 1/6 inch wide, pointed or sometimes more or less rounded at the tip, tapering to the base, smooth, without teeth, the lowest leaves withering early, the uppermost reduced to bracts.

Flowers: Borne singly in the axils of the uppermost reduced leaves (bracts), the bracts green, narrowly lanceolate, up to 3/4 inch long; flowers sessile, but appearing to be stalked because of the very slender floral tube.

Sepals: 5, green, united below to form a slender floral tube, the lobes up to 1/3 inch long,

3 inch long, white to pale blue or pink, the lower

h the filaments and anthers united, the anthers

f the slender floral tube.

es long, usually smooth; seeds pale brown.

ies may spread rapidly and form dense colorful

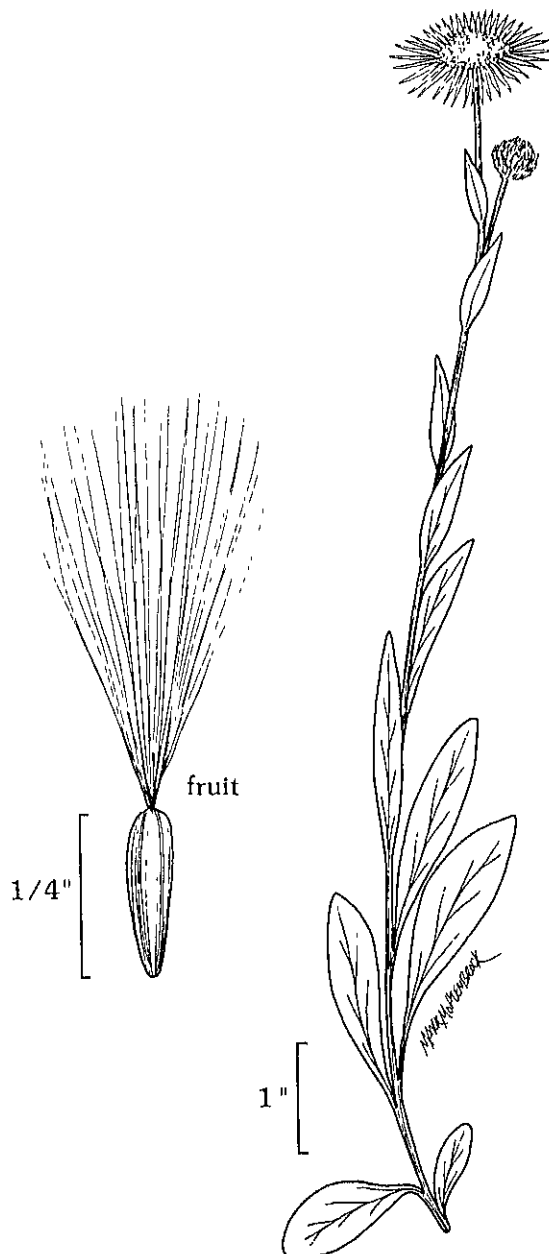
Wandering Fleabane

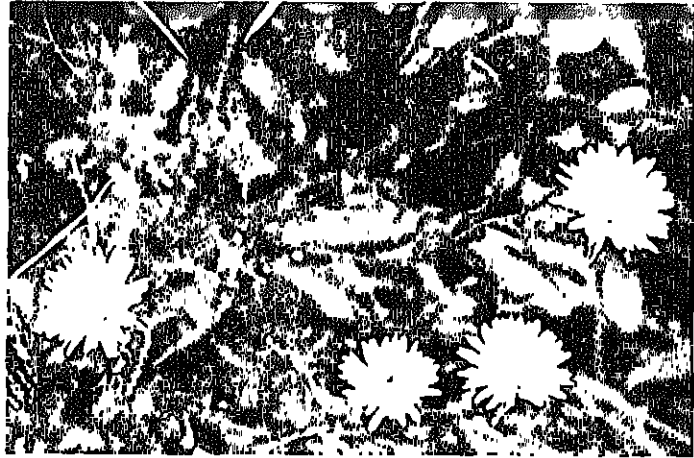
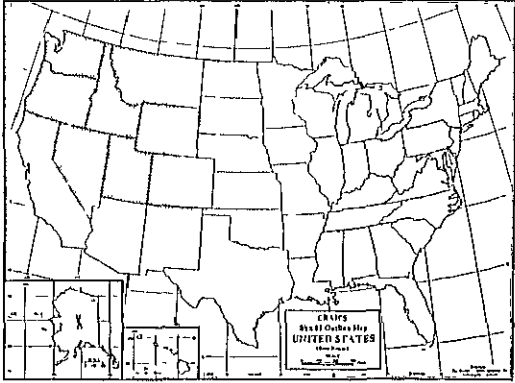
Erigeron peregrinus (Banks ex Pursh) Greene

Family: Composite (Compositae)

June-September

Field Marks: This fleabane, which looks like an aster, may reach a height of 2 feet. The broad purplish rays are 1/10-1/6 inch wide, and the basal leaves taper to the leaf stalk.





Local Notes:

Habitat: Wet meadows, along streams, in bogs, particularly in the high mountains.

Habit: Perennial herb with fibrous roots and short rhizomes.

Stems: Upright, up to 2 feet tall, smooth or sometimes a little hairy.

Leaves: Basal leaves spatulate to oblanceolate, up to 4 inches long, up to 1 inch wide, without teeth, tapering to the leaf stalk; leaves on the stem alternate, lanceolate to ovate, up to 2 inches long, sessile and sometimes clasping the stem.

Flowers: Crowded into 1 or a few heads at the tip of the stem, the head up to 2 inches wide, consisting of ray flowers and a central disk of tubular flowers; ray flowers 30-80, flat, purplish, to 1 inch long, 1/10-1/6 inch wide; disk flowers tubular, yellowish, up to 1/4 inch long; each head subtended by linear bracts.

Sepals: 0.

Petals: Some of them purple and ray-like, others tubular, yellow, forming a central disk.

Stamens: 5.

Pistils: Ovary inferior, hairy.

Fruits: Achenes up to 1/4 inch long, hairy, with 20-30 bristles at the tip.

Notes: This species is variable with respect to hairiness, amount of teeth on the leaves, and color of the rays.

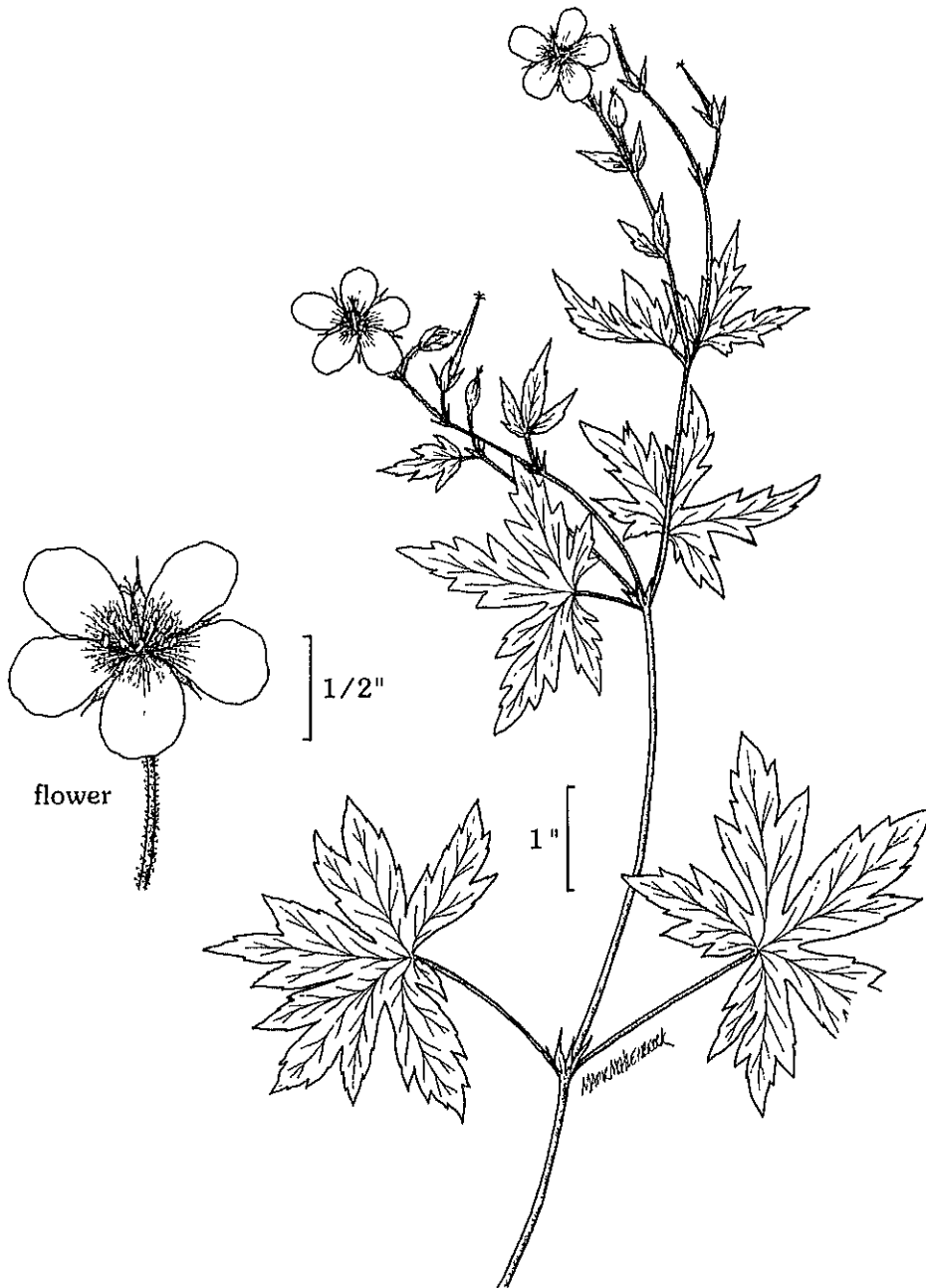
Richardson's Crane's-bill

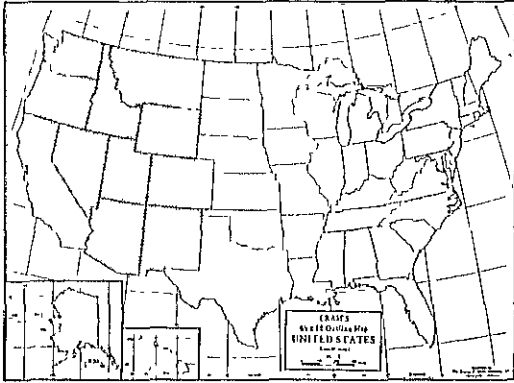
Geranium richardsonii Fisch. & Trautver.

Family: Geranium (Geraniaceae)

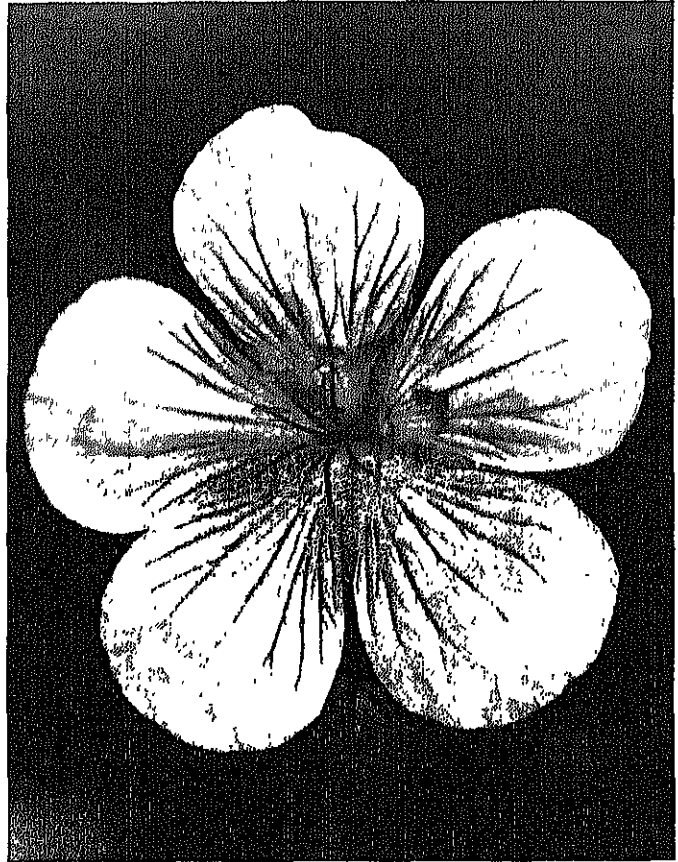
July-August

Field Marks: This geranium is distinguished by its large white or pinkish flowers with the petals hairy on the inner surface for about 1/2 their length. The flower stalks usually have purple glands.





Local Notes:



Habitat: Wet meadows, along streams, mostly in the mountains.

Habit: Perennial herb with fibrous roots.

Stems: Upright, branched or unbranched, up to 3 feet tall, smooth or somewhat hairy.

Leaves: Basal and alternate, simple but deeply palmately 5- to 7-lobed, up to 6 inches wide, smooth or sparsely hairy, the lowest leaves on long stalks.

Flowers: Several, 1-1 1/2 inches across, borne on stalks usually bearing purple glands.

Sepals: 5, green, free from each other, 1/4-1/2 inch long, tipped with a short awn.

Petals: 5, white or pinkish, free from each other, 1/2-3/4 inch long, each petal with purple veins and hairy on the inner surface for about 1/2 its length.

Stamens: 10.

Pistils: Ovary deeply 5-lobed, sparsely hairy.

Fruits: Elongated, up to 1/4 inch long, sparsely hairy, with the style persistent as a beak.

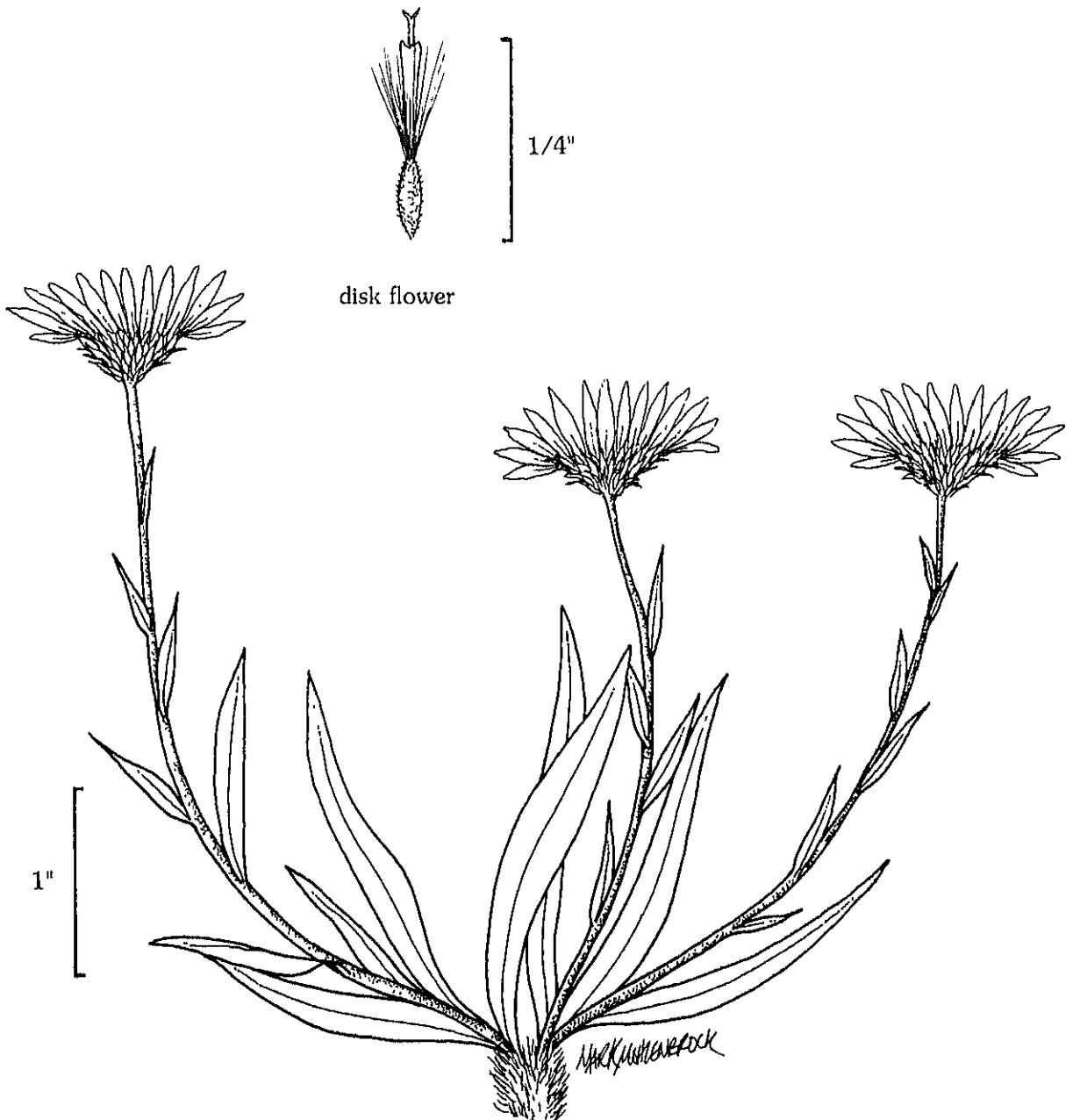
Lance-leaf Golden-weed

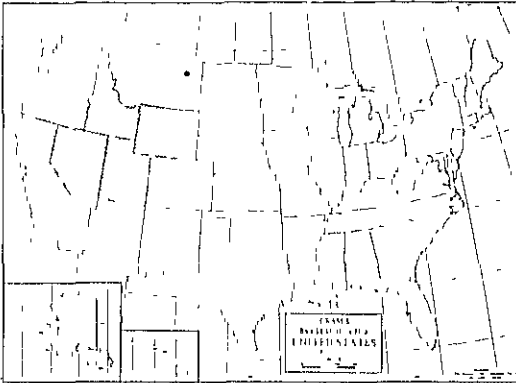
Haplopappus lanceolatus (Hook.) Torr. & Gray

Family: Composite (Compositae)

June-August

Field Marks: This species differs from others in *Haplopappus* by being herbaceous, by having yellow flowers usually arranged in corymbs, by having green-tipped bracts, and by having silky-covered achenes





Local Notes:



Habitat: Moist meadows, alkaline flats.

Habit: Perennial herb from a thickened rootstock and a taproot.

Stems: Ascending to upright, usually unbranched, up to 1 1/2 feet tall, smooth or hairy

Leaves: Mostly basal, oblanceolate, up to 6 inches long, up to 3/4 inch wide, pointed at the tip, tapering to the base, with spiny teeth along the edge or without teeth, smooth to woolly-hairy

Flowers: Many crowded into heads up to 1 inch across, each head bearing 15-35 yellow ray flowers and a disk of yellow tubular flowers, bracts surrounding each head narrow, smooth or hairy, green-tipped

Sepals: 0

Petals: 5, yellow, some of them united to form rays, others united to form short tubes that comprise the disk.

Stamens: 5.

Pistils: Ovary inferior

Fruits: Achenes narrowly ellipsoid, silky-hairy, bearing a tuft of brownish hairs at the tip

Seaside Heliotrope

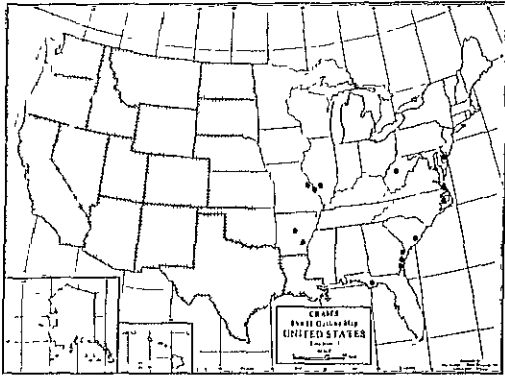
Heliotropium curassavicum L.

Family: Borage (Boraginaceae)

May-October

Field Marks: The white flowers of this heliotrope are borne on one side of a strongly curved axis. The leaves and stems are smooth. The stems usually lie on the ground before curving upward at their tips.





Local Notes:

Habitat: Usually in moist, salty areas.

Habit: Perennial herb with creeping rootstocks.

Stems: Sprawling along the ground before curving upward at their tips, up to 2 1/2 feet long, usually somewhat fleshy, smooth and often glaucous.

Leaves: Alternate, simple, succulent, linear to oblanceolate to obovate, or the lowest ones reduced to scales, up to 2 1/2 inches long, up to 3/4 inch wide, rounded or somewhat pointed at the tip, tapering to the base, sessile or on short stalks, smooth, glaucous, without teeth.

Flowers: Several borne on one side of a strongly curved axis, without bracts.

Sepals: 5, green, united below, up to 1/8 inch long, smooth.

Petals: 5, united below to form a short tube, white, sometimes with a purple center, up to 1/8 inch long.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior, 4-parted, smooth.

Fruits: Nutlets 4, ovoid, up to 1/8 inch long.

Notes: There is much variation in this species, including some of the flowers occasionally having a purple center. There is also variation in leaf shape and leaf size. This species is native to the Old World tropics.

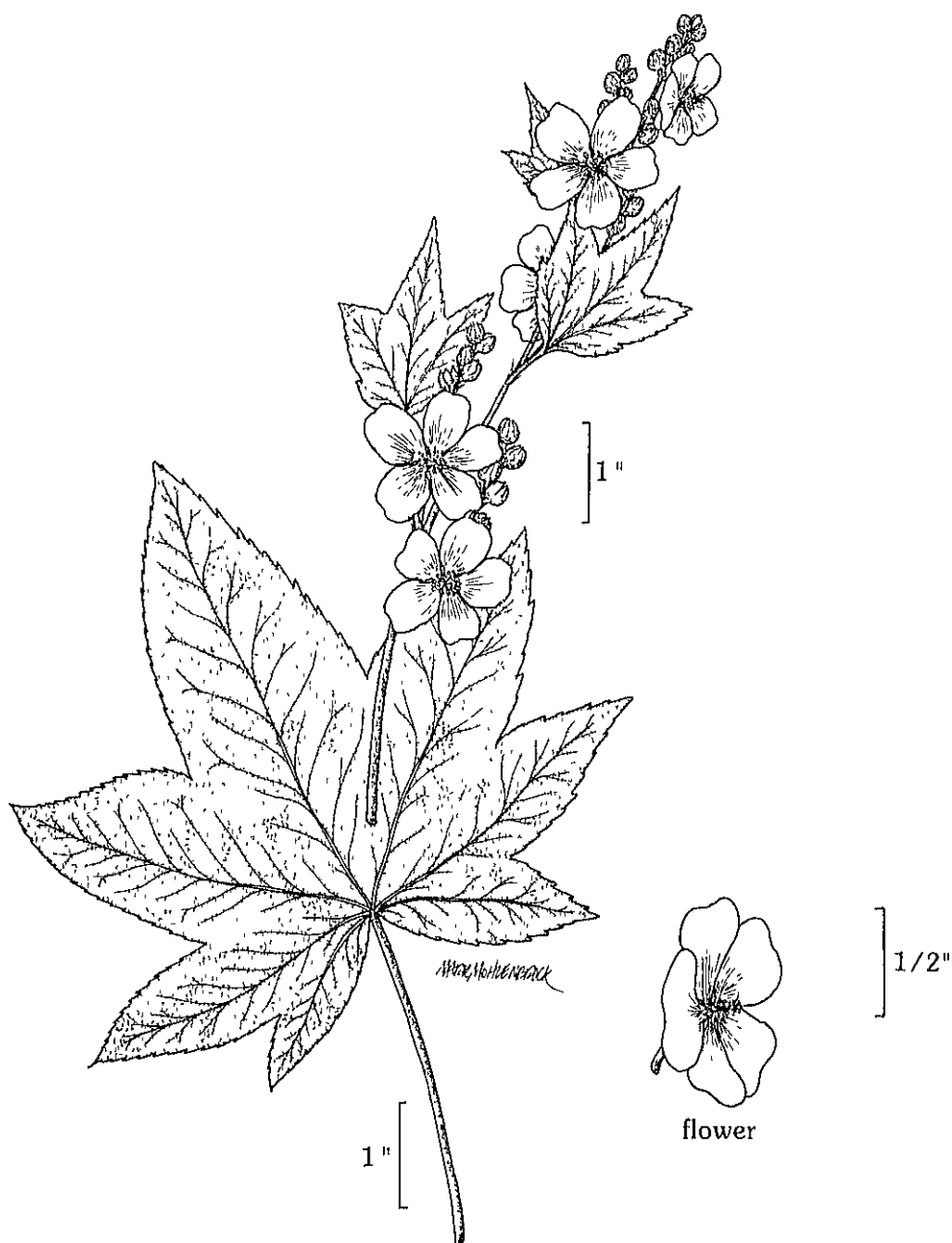
Streambank Wild-hollyhock

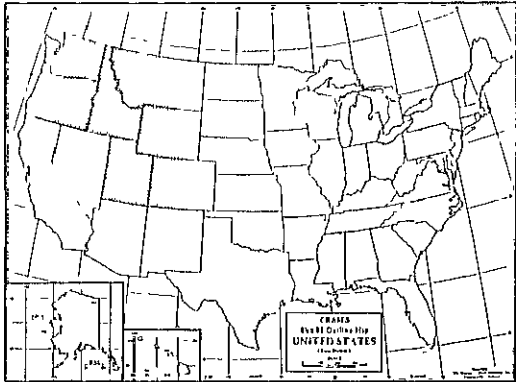
Iliamna rivularis (Dougl. ex Hook.) Greene

Family: Mallow (Malvaceae)

June-August

Field Marks: This hollyhock-like plant stands 3-6 feet tall and has 5 white or rose, notched petals about 1 inch long. The 5- to 7-lobed leaves are coarsely round-toothed and heart-shaped at the base





Local Notes:



Habitat: Along streams, in wet meadows, on moist slopes.

Habit: Shrubby perennial from thickened rootstocks.

Stems: Upright, up to 6 feet tall, hairy, with some of the hairs star-shaped (stellate).

Leaves: Alternate, simple, 5- to 7-lobed, up to 8 inches long, up to 6 inches wide, heart-shaped at the base, the lobes triangular, coarsely round-toothed, hairy.

Flowers: Few to several in axillary clusters and terminal racemes; bracts 3, narrow to thread-like, 1/6-1/4 inch long; flower stalks up to 3/4 inch long.

Sepals: 5, green, united below, 1/4-1/3 inch long, with star-shaped hairs.

rose, free from each other, about 1 inch long, notched at the tip.

in, the column with star-shaped hairs.

terior.

ointed at the tip, up to 3/4 inch long,

1 2-4 seeds; seeds minutely hairy.

25.

Mexican Summer-cypress

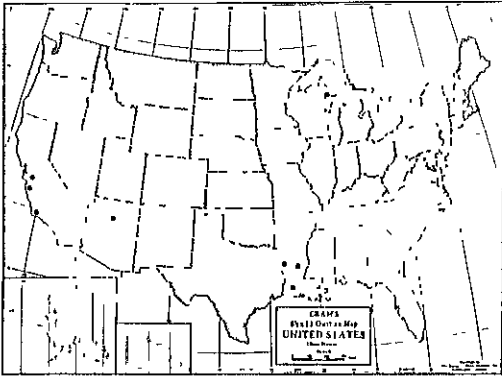
Kochia scoparia (L.) Schrad.

Family: Goosefoot (Chenopodiaceae)

July-October

Field Marks: The following combination of characters distinguishes this species annual;
greenish flowers without petals, borne in the axils of the leaves; leaves without teeth





Local Notes:



Habitat: Disturbed areas.

Habit: Annual herb with fibrous roots.

Stems: Upright, branched, up to 4 feet tall, usually hairy but occasionally nearly smooth.

Leaves: Alternate, simple, linear to lanceolate to obovate, up to 4 inches long, up to 1/2 inch wide, flat, hairy or smooth, pointed or rounded at the tip, tapering to the base.

Flowers: Borne in clusters in the axils of the leaves.

Sepals: 5, green, united to form a minute cup, ciliate, curving over the fruit at maturity.

Petals: 0.

... 2 ...ly 3.

... containing an obovoid seed 1/8-1/6 inch long, ... granular.

... weed. Cultivated forms have a spherical ... this species varies in degree of hairiness and in

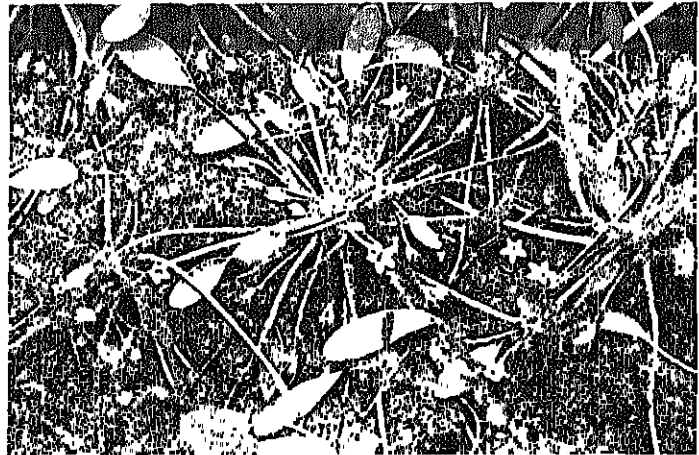
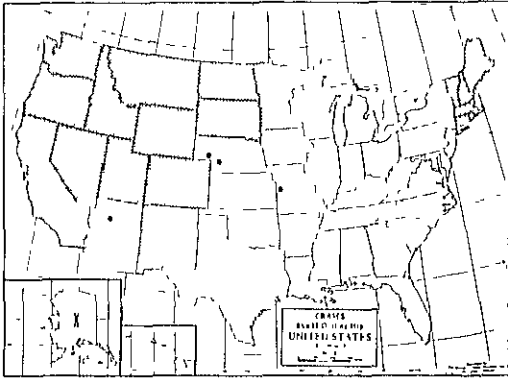
Limosella aquatica L.

May-November

1"

flower

1/8"



Local Notes:

Habitat: Along streams, in ponds, sometimes in water as much as 6 inches deep

Habit: Perennial herb with stolons.

Stems: Only the flower-bearing stem present, 1/2-1 inch long, smooth.

Leaves: All in a basal tuft, the blades often floating, oblong to elliptic, up to 1 1/2 inches long, up to 1/2 inch wide, on long stalks 2-4 times longer than the blade, smooth, without teeth.

Flowers: Solitary at the tip of leafless stalks

Sepals: 5, green with purple spots, united below to form a short tube, smooth, up to 1/8 inch long.

Petals: 5, white, united below to form a short tube, the lobes nearly equal in size and spreading, about 1/12 inch long.

Stamens: 4.

Pistils: Ovary superior, smooth.

Fruits: Capsules ovoid to spherical, up to 1/8 inch long, smooth, with dark brown seeds.

Notes: The seeds are sometimes eaten by waterfowl.

Streamside Bluebells

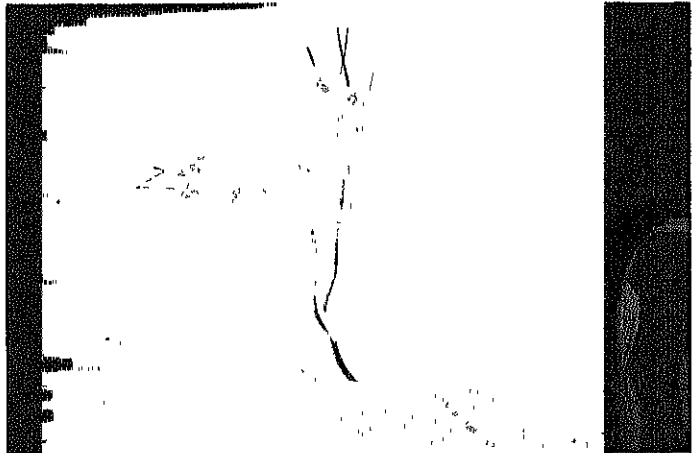
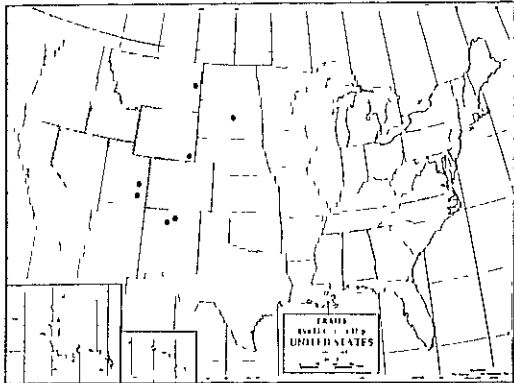
Mertensia ciliata (E. James ex Torr.) G. Don

Family: Borage (Boraginaceae)

June-August

Field Marks: Bluebells are distinguished by their usually bluish, tubular flowers and toothless, alternate leaves. *Mertensia ciliata* differs from the others by usually being at least 2 feet tall, by having leaves smooth on both surfaces, and by its sepals less than 1/6 inch long





Local Notes:

Habitat: Wet meadows, along streams, particularly in the mountains.

Habit: Perennial herb from a thickened rootstock.

Stems: Upright, up to 4 1/2 feet tall, smooth, sometimes bluish

Leaves: Alternate, simple, elliptic to ovate to lanceolate, up to 6 inches long, up to 2 inches wide, more or less pointed at the tip, tapering or less commonly rounded at the base, smooth, the basal leaves larger and on long stalks, the upper leaves progressively smaller and without stalks.

Flowers: Several clustered in small cymes, each cyme subtended by a small bract.

Sepals: 5, green, united only at the base, up to 1/6 inch long, smooth except for short cilia along the edges

Petals: 5, blue, united to form a tube, up to 3/4 inch long.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior, 4-parted.

Fruits: Nutlets 4, somewhat veiny

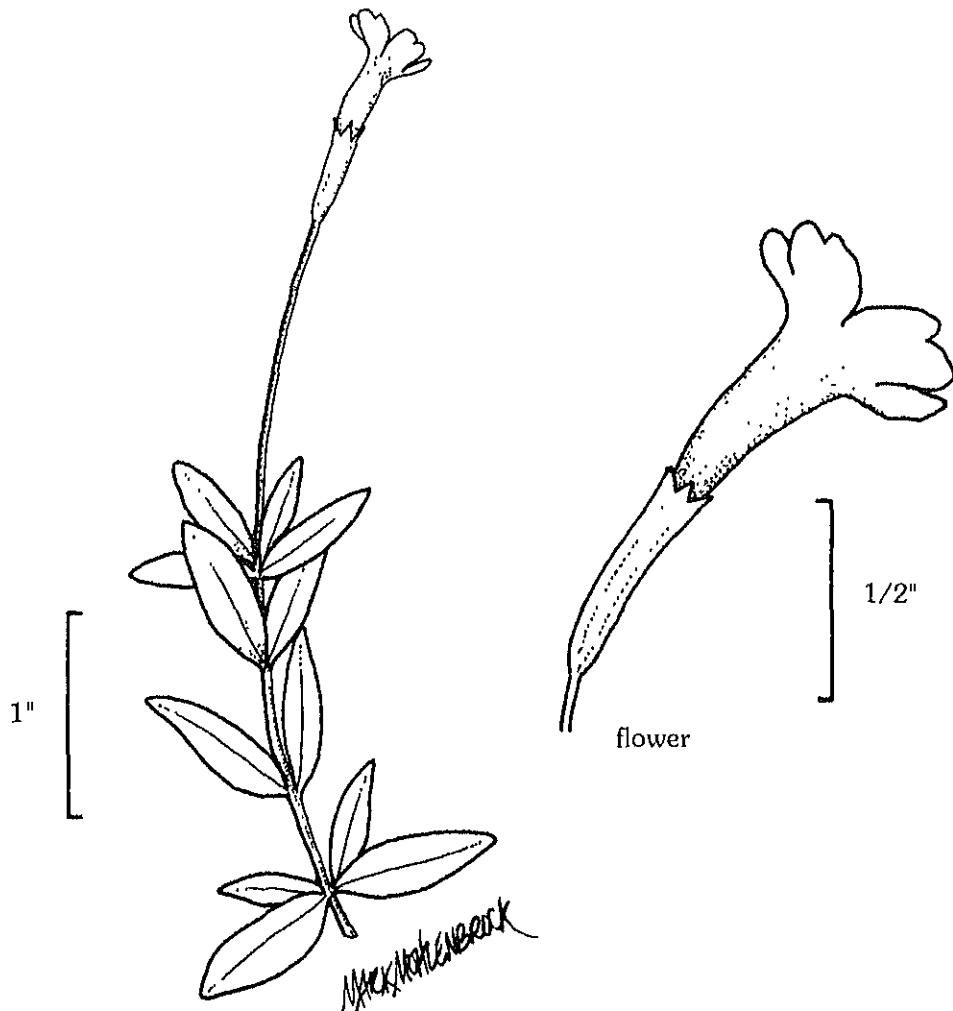
Primrose Monkey-flower

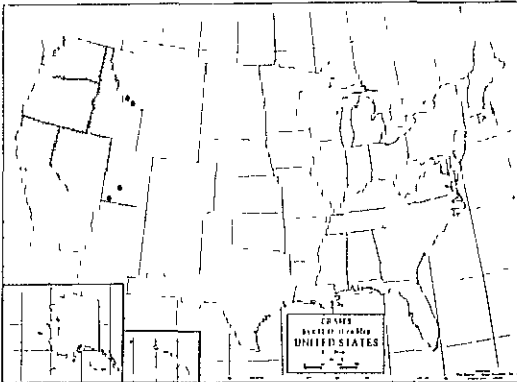
Mimulus primuloides Benth.

Family: Figwort (Scrophulariaceae)

June-August

Field Marks: This dwarf, yellow-flowered species has its small flowers borne on leafless stems.





Local Notes:

Habitat: Wet meadows, along streams.

Habit: Perennial herb with short rhizomes and slender stolons.

Stems: Upright, bearing only a solitary flower on a stalk up to 3 inches long, usually smooth.

Leaves: All clustered at the base of the plant, oblanceolate, up to 1 1/2 inches long, up to 1/2 inch wide, pointed at the tip, tapering to the base, shallowly toothed, hairy.

Flowers: Solitary at the tip of a slender stalk.

Sepals: 5, green, united below to form a tube 1/4-1/3 inch long and with reddish ribs, smooth, the lobes 1/12 inch long.

Petals: 5, yellow with reddish dots, united below to form a tube 1/3-1/2 inch long, the lobes notched.

Stamens: 4.

Pistils: Ovary superior.

Fruits: Capsules ovoid, pointed at the tip, 1/4-1/3 inch long, smooth

Notes: The petals fall away shortly after the flowers open

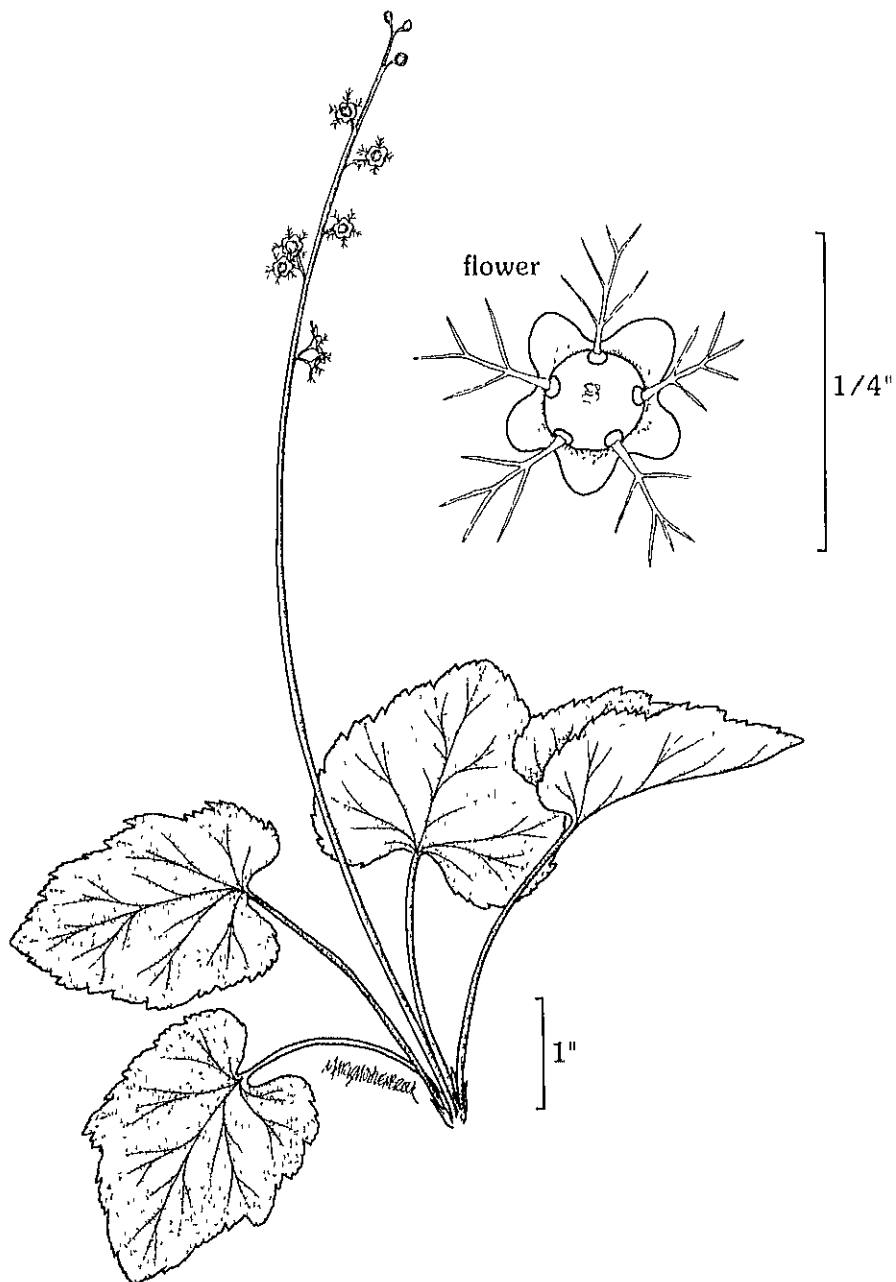
Five-point Bishop's-cap

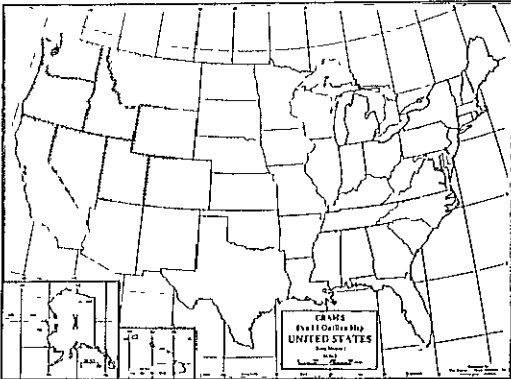
Mitella pentandra Hook.

Family: Saxifrage (Saxifragaceae)

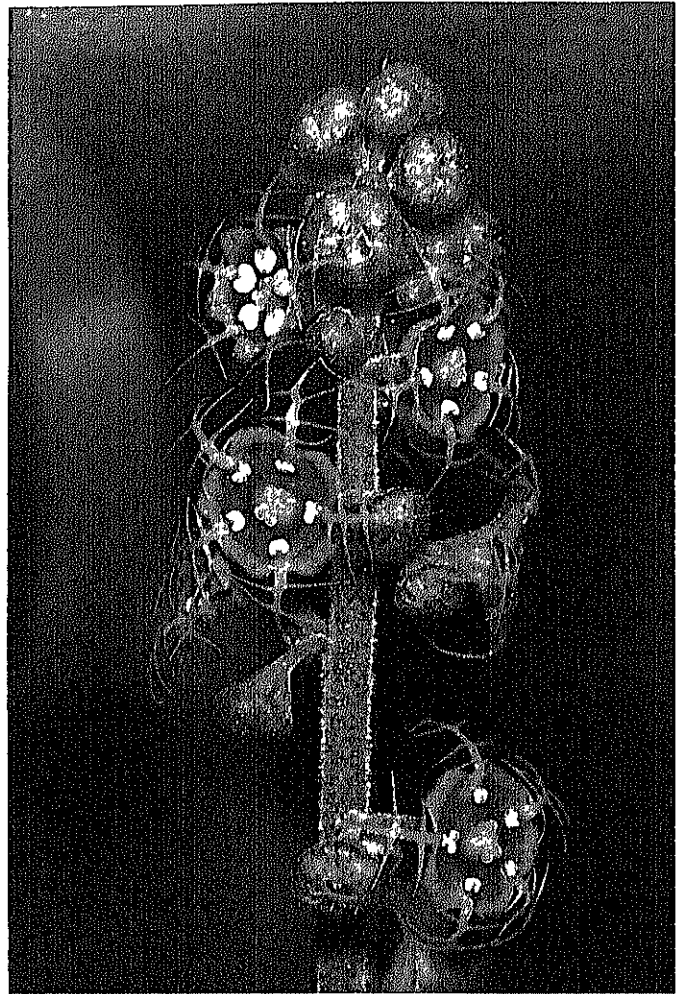
May-July

Field Marks: The 5 petals of the flowers of this species are deeply and intricately divided, giving the appearance of a snowflake





Local Notes:



Habitat: Moist woods, bogs.

Habit: Perennial herb with short rootstocks.

Stems: Upright, slender, up to 1 foot tall, glandular-hairy, bearing only a raceme of flowers.

Leaves: All basal, shallowly and palmately 5-lobed, heart-shaped at the base, up to 3 inches long and about as broad, hairy, with some of the hairs glandular, toothed; stalks up to 4 inches long, hairy or smooth.

Flowers: 8-20 in an uncrowded raceme, on short stalks.

Sepals: 5, green, united below, the lobes more or less triangular, rounded at the tip, usually curved downward.

Petals: 5, white, free from each other, finely divided into thread-like segments.

Stamens: 5.

Pistils: Ovary more or less inferior; styles 2

Fruits: Capsules ovoid, 2-beaked, up to 1/6 inch across, with numerous smooth and shiny seeds.

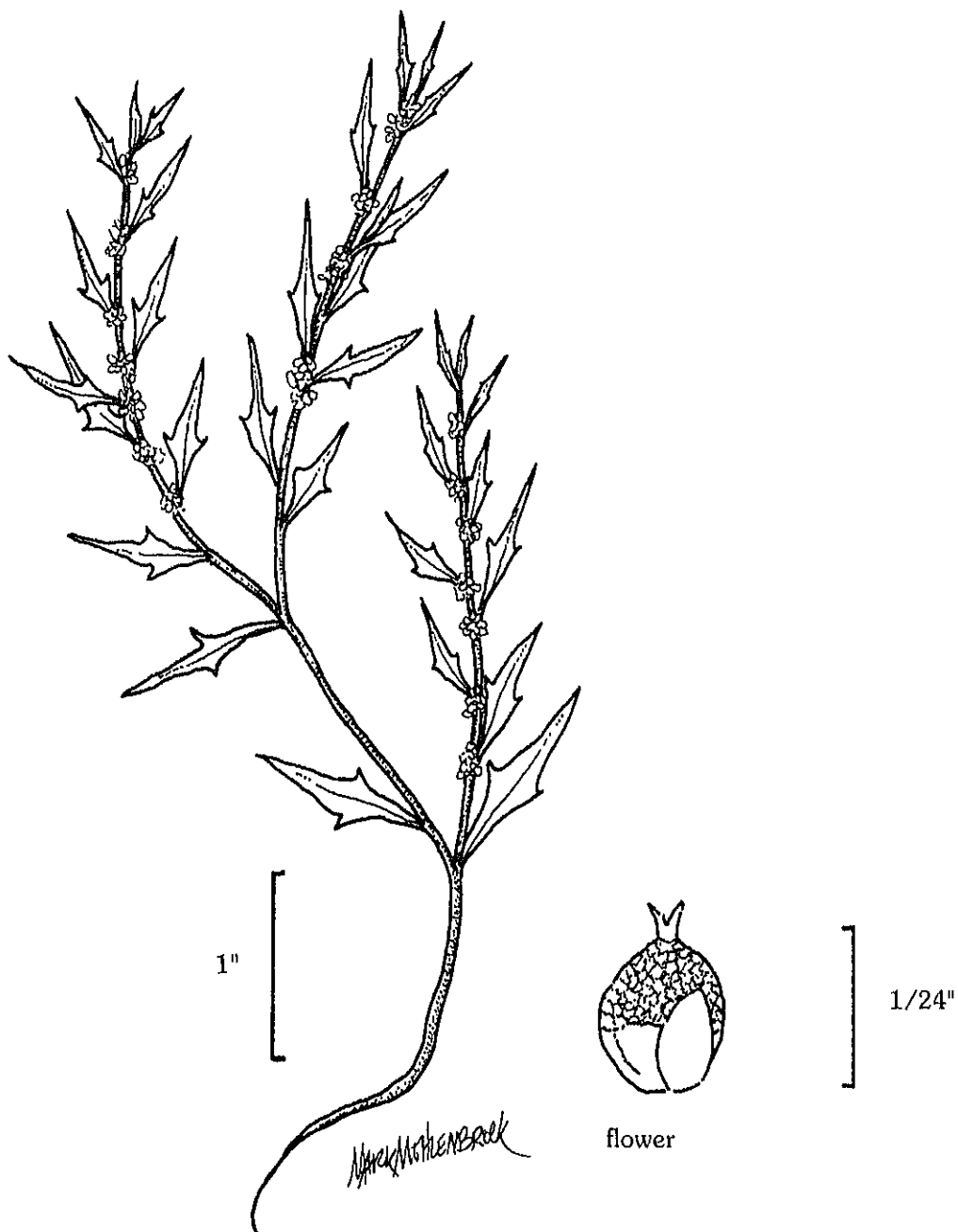
Nuttall's Poverty-weed

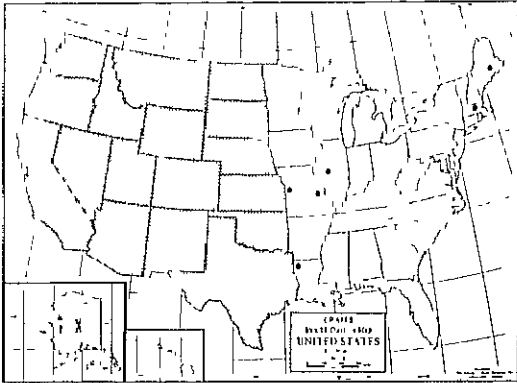
Monolepis nuttalliana (J.A. Schultes) Greene

Family: Goosefoot (Chenopodiaceae)

April-September

Field Marks: This branched annual has alternate, hastate leaves and small, greenish flowers with only 1 sepal and 1 stamen





Local Notes:

Habitat: Alkaline soils.

Habit: Annual herb with fibrous roots.

Stems: Sprawling and ascending, much branched, up to 10 inches tall, succulent, mealy when young, but becoming smooth

Leaves: Alternate, simple, hastate, up to 2 inches long, mealy at first, becoming smooth.

Flowers: Many in small, dense, sessile, reddish clusters, the male and female often borne separately on separate plants.

Sepals: 1, spatulate to obovate, about 1/24 inch long.

Petals: 0.

Stamens: 1.

Pistils: Ovary superior; styles 2.

Fruits: Ovoid, pitted, about 1/24 inch across, containing 1 dark seed.

Notes: The seeds are sometimes eaten by birds.

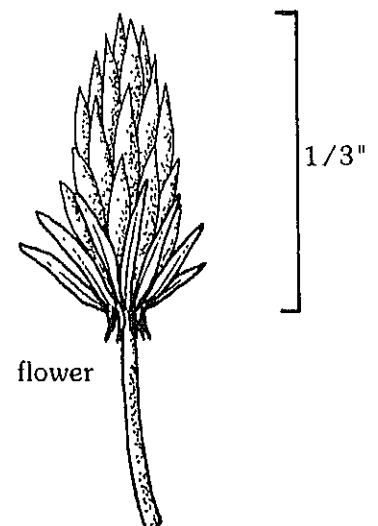
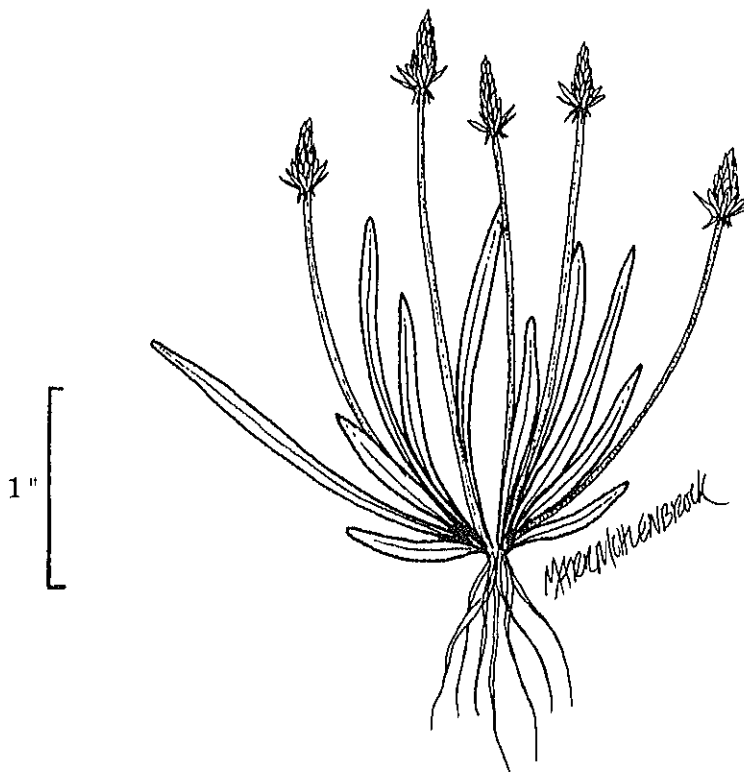
Sedge Mouse-tail

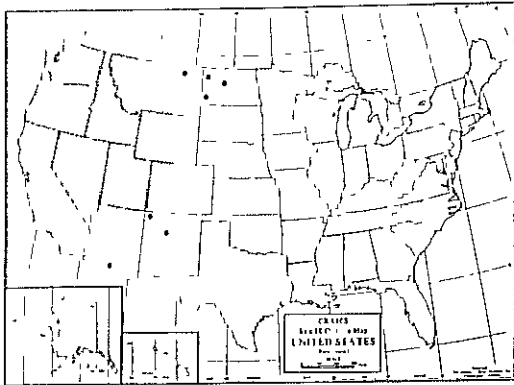
Myosurus aristatus Benth. ex Hook.

Family: Butter-cup (Ranunculaceae)

April-July

Field Marks: This small plant differs from other mouse-tails by the slender beak of the achene spreading, giving the spike of fruits a jagged margin.





Local Notes:



Habitat: Most moist areas.

Habit: Annual herb with fibrous roots.

Stems: Upright, often curved, slender, up to 3 1/2 inches long, smooth, without leaves.

Leaves: All basal, linear to narrowly spatulate, up to 3 inches long, smooth.

Flowers: Very tiny, densely crowded into a terminal cylindrical spike up to 1/2 inch long.

Sepals: Usually 5 green, oblong, up to 1/16 inch long, spurred at the base.

ent), greenish yellow, very narrow, about as long as the sepals,
its surface.

lindrical receptacle, each with a superior ovary.

smooth, with a slender, spreading beak that projects outward

ten by small birds and mammals.

Hooker's Evening-primrose

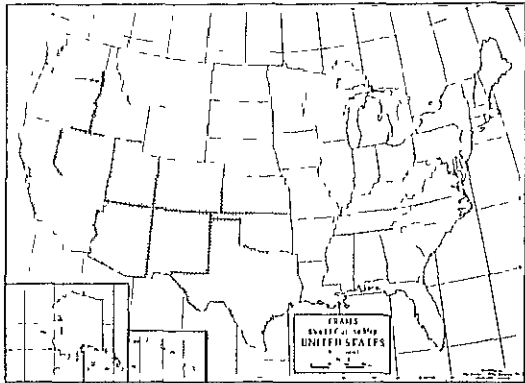
Oenothera elata HBK.

Family: Evening-primrose (Onagraceae)

June-September

Field Marks: The distinguishing features of this evening-primrose are the 4-paired stigmas, the yellow petals 1-2 inches long, and the narrow leaves less than 1/4 as wide as long





Local Notes:



Habitat: Along streams, in marshes, on wet cliffs.

Habit: Biennial herb with a taproot

Stems: Upright, branched, up to 6 feet tall, hairy, with some of the hairs gland-tipped.

Leaves: Alternate as well as clustered at the base of the plant, simple, elliptic to lanceolate, usually pointed at the tip, hairy, the basal leaves often coarsely toothed, up to 7 inches long, the leaves on the stem finely toothed, up to 4 inches long, the basal leaves with long stalks, the stem leaves sessile or with short stalks.

Flowers: Many crowded in a dense showy cluster up to 15 inches long; bracts lanceolate, hairy.

Sepals: 4, green to reddish, united below to form a floral tube, the tube up to 1 3/4 inches long, the lobes up to 1 3/4 inches long, hairy.

Petals: 4, yellow but fading to reddish, free from each other, obovate, up to 2 inches long.

Stamens: 8, up to 1 1/2 inches long.

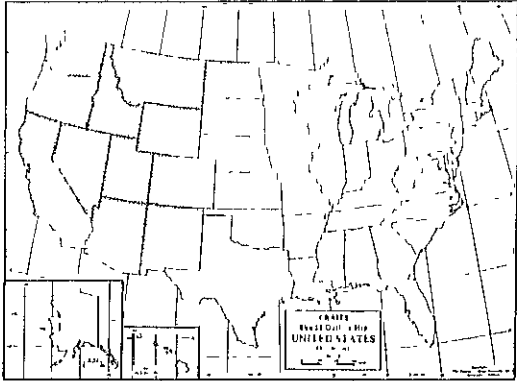
Pistils: Ovary inferior, hairy.

Fruits: Capsules cylindrical, up to 2 inches long, up to 1/4 inch thick, hairy, containing several reddish brown seeds.

Notes: In the past this species has been known as *O. hookeri*.

Oenothera flava (A. Nels.) Garrett

May-July[illegible]



Local Notes:

Habitat: Low, dry depressions.

Habit: Perennial herb with a thick taproot.

Stems: Only the flower-bearing stem present, upright, up to 1 foot tall, smooth or hairy, the hairs sometimes glandular.

Leaves: All basal, narrowly oblong to oblanceolate, irregularly toothed or lobed, up to 8 inches long, up to 2 inches wide, smooth or glandular-hairy; leaf stalk slightly winged.

Flowers: Solitary at the tip of a leafless stem, opening in the evening, up to nearly 2 inches

coming purplish, more or less free from each other at the tip and coming tubular below, the tube up to nearly 3 inches long.
v. free from each other, 1/2-1 inch long.

Stamens: 6.

Pistils: Ovary inferior; stigmas 4.

Fruits: Capsules more or less woody, winged in the upper half, ovoid, 1/2-1 1/2 inches long, with minutely granular, obovoid seeds with a wing-like margin.

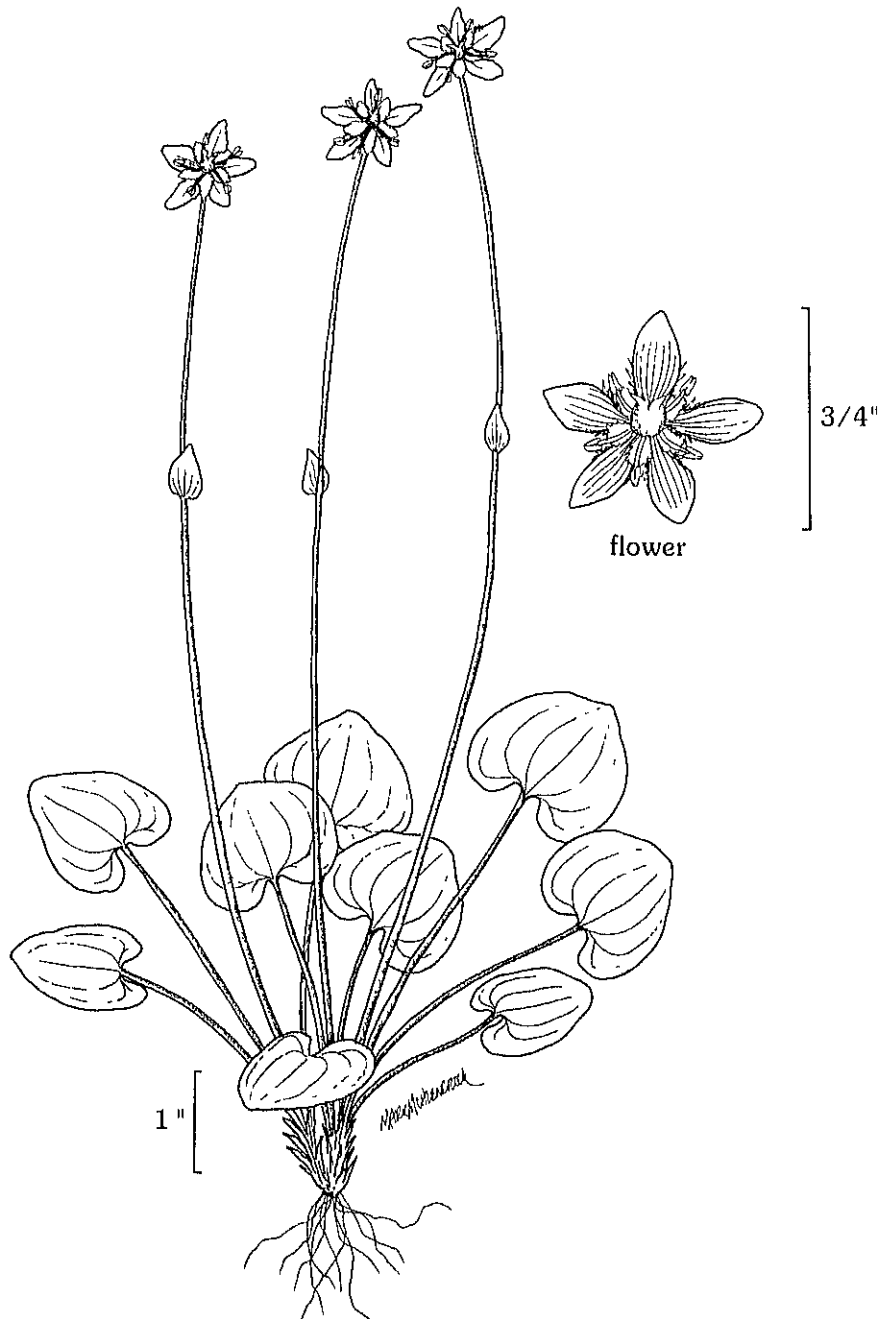
Fringed Grass-of-Parnassus

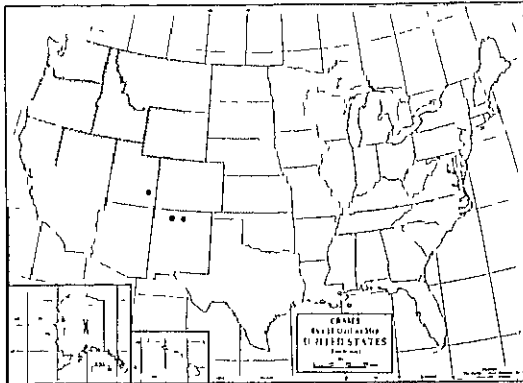
Parnassia fimbriata K.D. Koenig

Family: Saxifrage (Saxifragaceae)

July-September

Field Marks: This species has broad, heart-shaped leaves and 5 white petals that are fringed along the sides. It differs from others in the genus by the small petal-like structures (staminodia) between the petals and the stamens that are shallowly lobed at the tip.





Local Notes:



Habitat: Bogs, around springs

Habit: Perennial herb with a short, thickened rootstock.

Stems: All stems bearing only a single flower and no leaves (1 bract present), up to 15 inches tall, smooth.

Leaves: All basal, orbicular, up to 2 inches across, deeply heart-shaped at the base, smooth, without teeth; leaf stalks up to 6 inches long, smooth.

Flowers: Solitary on a leafless stem, although a single leaf-like bract usually present about 1/2-way up stem, the bract ovate, sessile and clasping the stem, smooth, up to 1/2 inch long.

Sepals: 5, united below, green, the lobes 1/6-1/4 inch long, elliptic to ovate, smooth

Petals: 5, free from each other, white but with conspicuous veins, obovate, white, about 1/2 inch long, fringed along the edges; small petal-like structures (staminodia) between the petals and the stamens lobed at the tip, up to 1/4 inch long.

Stamens: 5

Pistils: Ovary superior or somewhat inferior, 3- to 4-parted.

Fruits: Capsules 3- or 4-parted nearly to base, 1/3-1/2 inch long, smooth, containing many tiny winged seeds

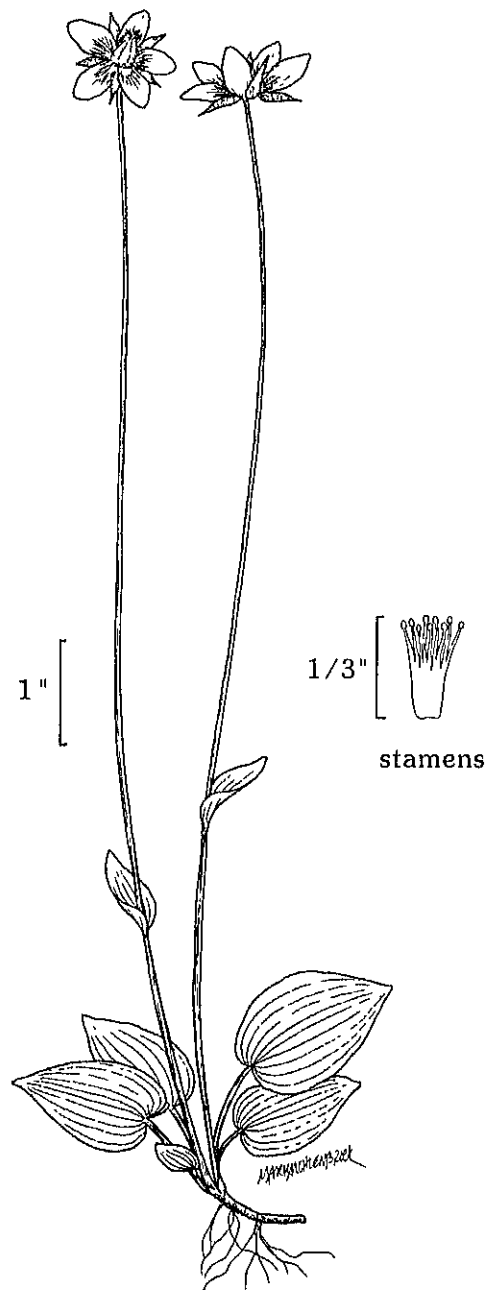
Northern Grass-of-Parnassus

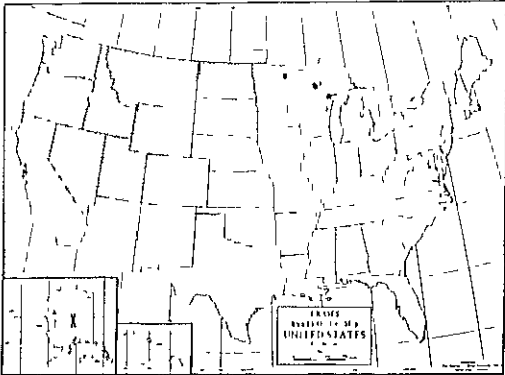
Parnassia palustris L.

Family: Saxifrage (Saxifragaceae)

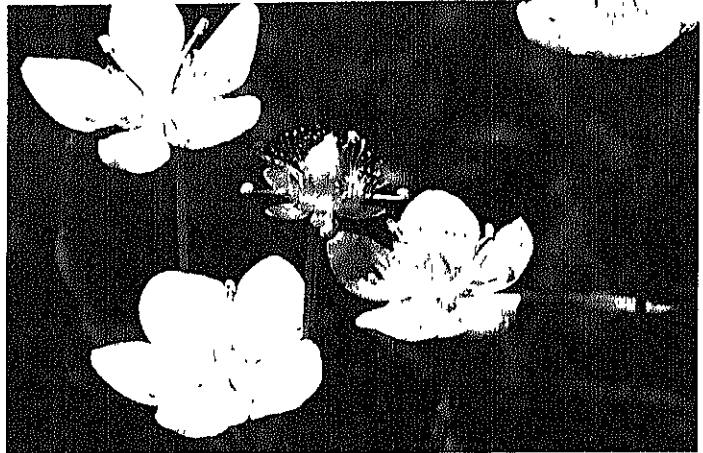
July-October

Field Marks: This species differs from others in the genus by its unfringed petals that have 3-13 veins.





Local Notes:



Habitat: Wet meadows and other moist places

Habit: Perennial herb with short rootstocks.

Stems: Upright, slender, unbranched, up to 1 1/2 feet tall, smooth, bearing a single leaf (often called a bract) about 1/3 the way up the stem.

Leaves: All basal except for the single, ovate, sessile leaf (or bract) about 1/3 way up the stem; basal leaves ovate, heart-shaped to tapering to the base, up to 1 1/2 inches long, smooth, without teeth, on stalks up to 4 inches long.

Flowers: Solitary on the stem, up to 1 inch across

Sepals: 5, green, united below to form a short floral tube, lanceolate to ovate, pointed at the tip, 1/4-1/2 inch long, with 5-7 veins.

Petals: 5, white, free from each other, ovate to obovate, up to 1/2 inch long, not fringed, with 3-13 veins.

Stamens: 5 fertile, with many sterile stamens present consisting of slender, gland-tipped filaments up to 1/3 inch long.

Pistils: Ovary more or less superior or slightly inferior.

Fruits: Capsules ovoid, up to 1/2 inch long, subtended by the persistent sepals, with numerous tiny, angular seeds.

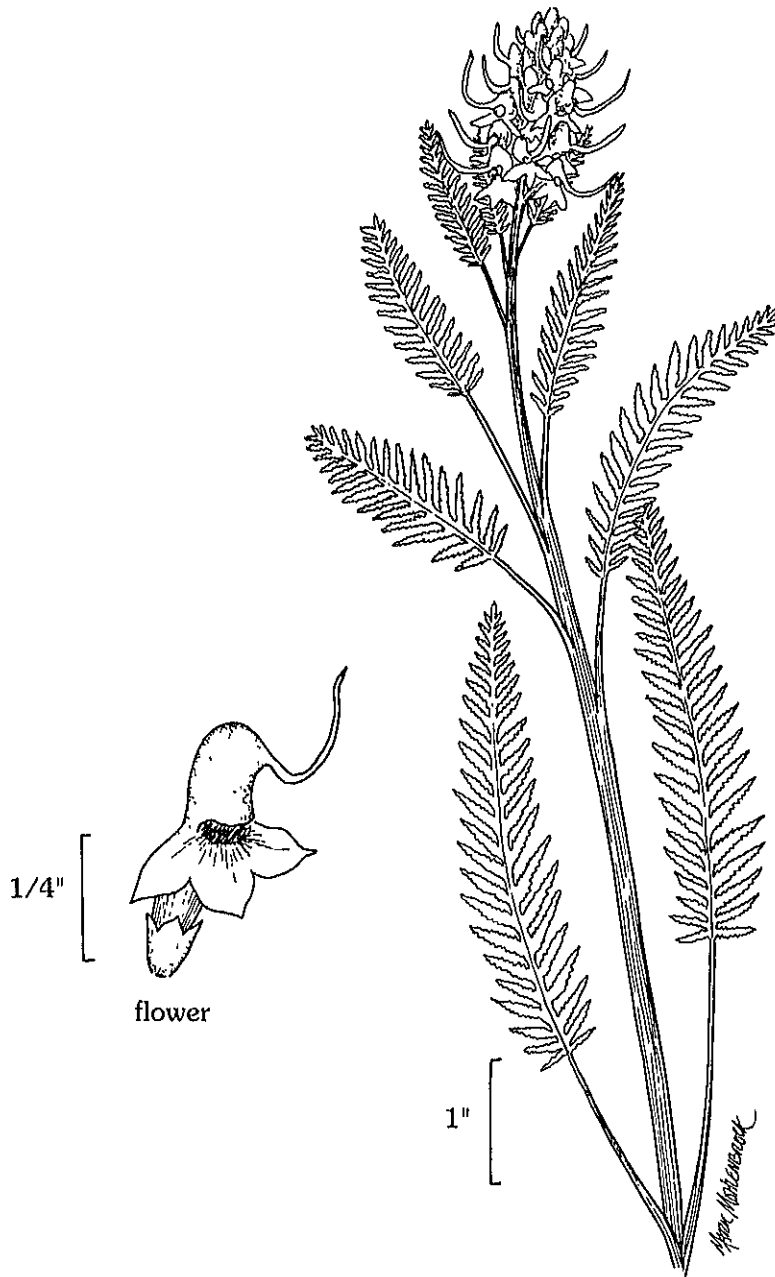
Elephant's-head Lousewort

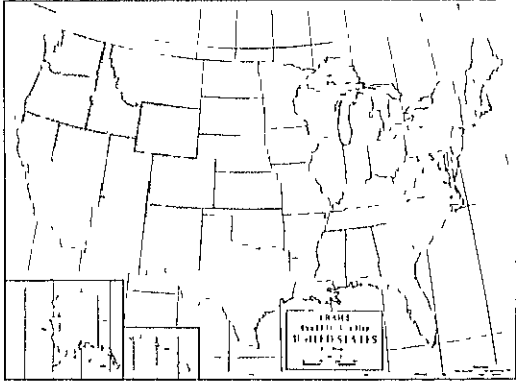
Pedicularis groenlandica Retz.

Family: Figwort (Scrophulariaceae)

June-September

Field Marks: When in flower this is one of the most easily recognized plants because the upper lip of the purple flower is prolonged into a curved beak that resembles the trunk of an elephant. The leaves are deeply pinnately divided.





Local Notes:



Habitat: Wet meadows, damp woods, along streams, particularly in the mountains.

Habit: Perennial herb with a thickened rootstock.

Stems: Upright, up to 2 feet tall, usually unbranched but often several together from the base, smooth.

Leaves: Nearly all basal but a few alternate, simple but deeply pinnately divided nearly to the middle, up to 12 inches long, up to 3 inches wide, smooth, each lobe of the leaf toothed, the lowest leaves stalked, the upper smaller and without a stalk.

Flowers: Several crowded together into a spike, the spike up to 8 inches long, each flower subtended by narrow often deeply lobed bracts.

ow, green, the tips about 1/20 inch long, triangular, the united part
face.

p to 1/3 inch long, the upper petal prolonged

al, smooth; seeds 1/8-1/6 inch long,

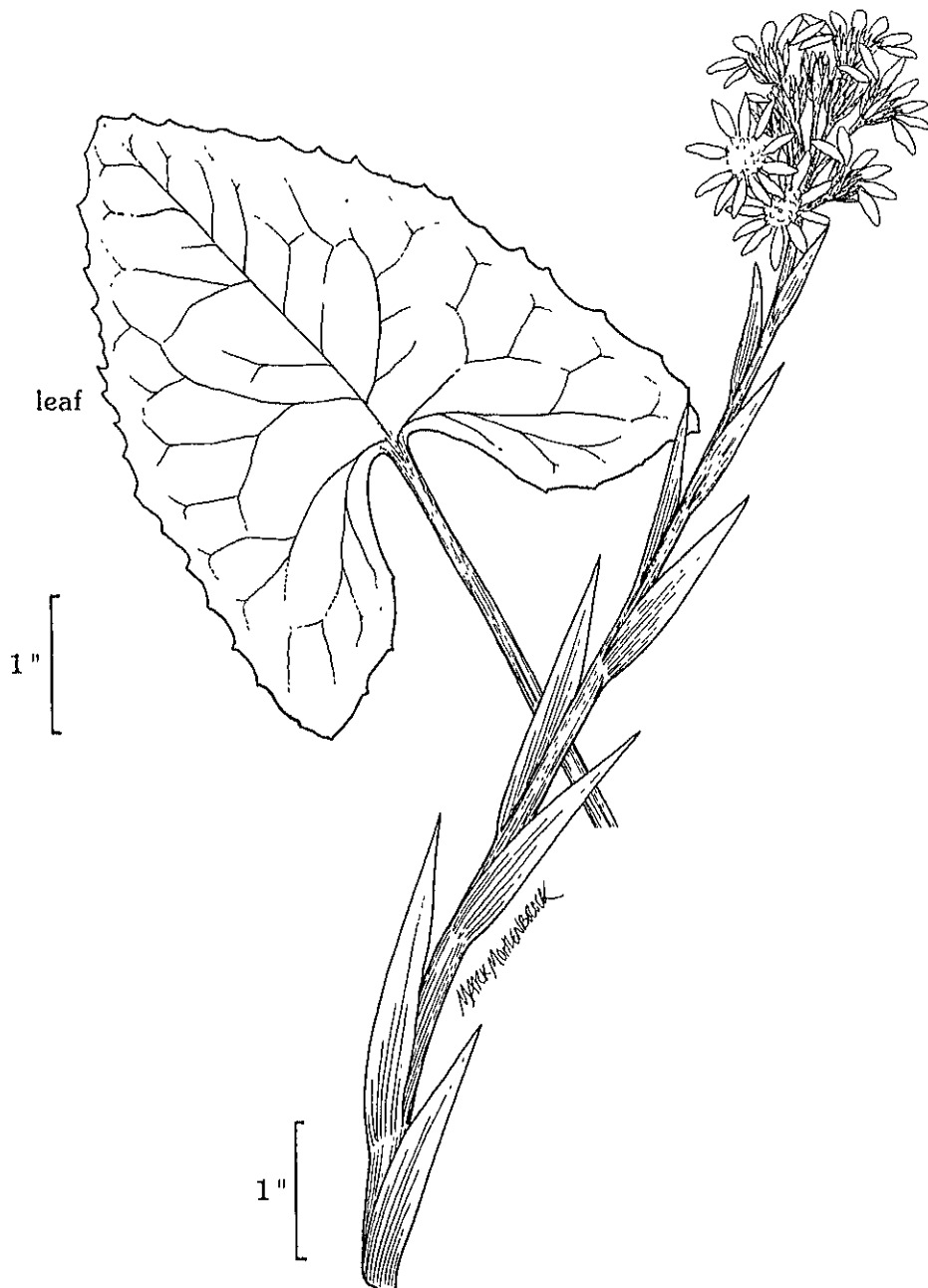
Arrow-leaf Sweet Coltsfoot

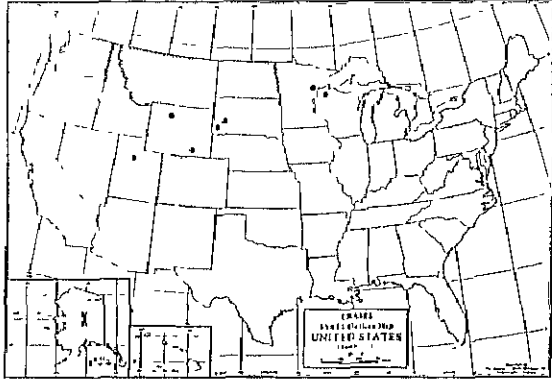
Petasites sagittatus (Banks ex Pursh) Gray

Family: Composite (Compositae)

April-June

Field Marks: This species has large arrowhead-shaped basal leaves that are toothed as well as white-woolly on the lower surface. The whitish flowers are crowded together into heads





Local Notes:



Habitat: Wet meadows, bogs, particularly in high mountains.

Habit: Perennial herb with creeping rhizomes.

Stems: Upright, unbranched, up to 1 1/2 feet tall, smooth or hairy, bearing a few toothless, parallel-veined bracts with a dilated tip.

Leaves: All basal, arrowhead-shaped, up to 1 foot long, up to 10 inches wide, toothed, smooth on the upper surface, white-woolly on the lower surface, on long stalks. (What appears to be narrow, toothless leaves on the stem are actually bracts.)

Flowers: Many borne in heads, with several heads crowded at the tip of the stem; some flowers ray-like and white, others tubular and white.

Sepals: 0.

Petals: 5, some united to form white rays, others united to form a whitish tube.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Achenes very narrow, with a tuft of bristles at the tip.

Phyla cuneifolia (Torr.) Greene

May-September

1/8"

petals

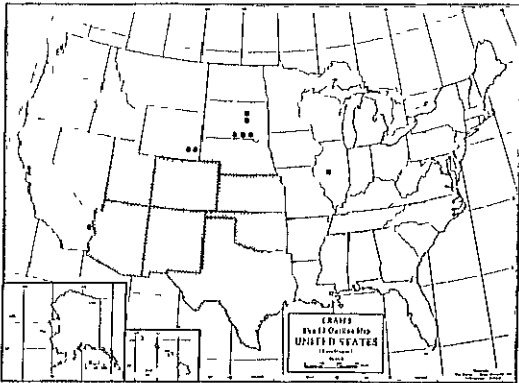
1"

1/4"

bract

Mark Horton Brock

This botanical illustration consists of three main parts. At the top left is a detailed view of a single flower, showing five petals with prominent veins. A vertical scale bar to its left is labeled '1/8"'. Below the flower is the label 'petals'. In the center is a drawing of the whole plant, showing a slender, upright stem with several compound leaves. Each leaf is composed of many small, linear leaflets. At the top of the stem is a dense, rounded cluster of small flowers. A vertical scale bar to the right of the plant is labeled '1"'. The artist's signature, 'Mark Horton Brock', is written in cursive across the middle of the stem. At the bottom right is a detailed view of a single bract, which is ovate and covered in fine, dense hairs. A vertical scale bar to its left is labeled '1/4"'. The label 'bract' is placed above this drawing.



Local Notes:

Habitat: Moist prairies.

Habit: Creeping perennial herb, rooting at the nodes.

Stems: Creeping to ascending, to 3 feet long, with appressed hairs.

Leaves: Opposite, simple, narrowly oblanceolate, widest above the middle, up to 1 inch long, up to 1/3 inch wide, pointed at the tip, smooth or sparsely hairy, with 1-4 pairs of teeth.

Flowers: Several borne in rounded to cylindrical heads, the heads up to 1 inch long, up to 1/2 inch wide, on a stalk up to 2 1/2 inches long, bracts about 1/4 inch long, tapering to a long point.

Sepals: 4, united below, green, very small.

Petals: 4, united below to form a tube, white to purplish, the tube up to 1/4 inch long.

Stamens: 4, attached to the tube of the petals.

Pistils: Ovary superior, shallowly 4-parted.

Fruits: Borne in pairs, enclosed by the sepals.

Notes: The seeds may be eaten by small birds and other animals.

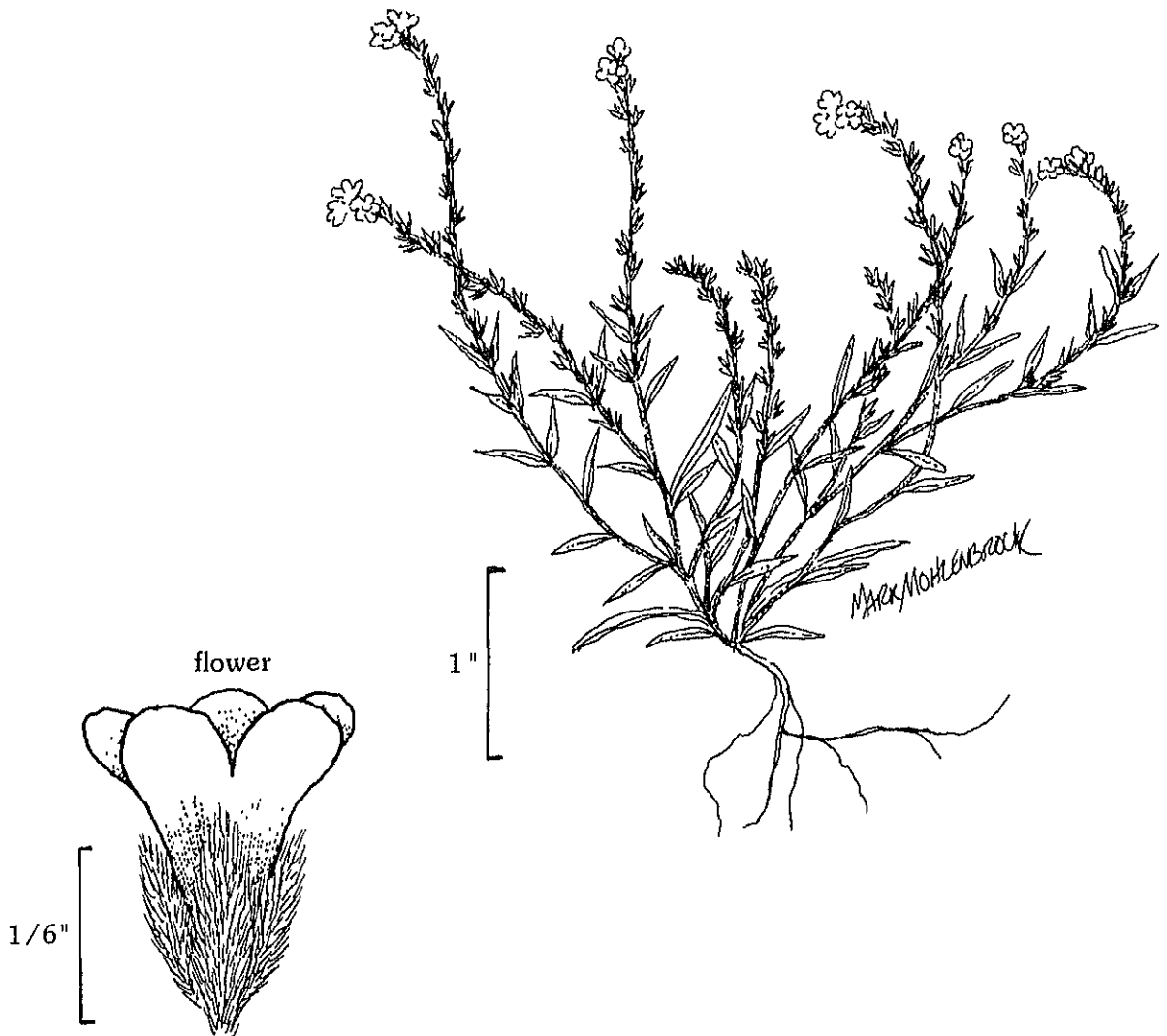
Scouler Popcorn-flower

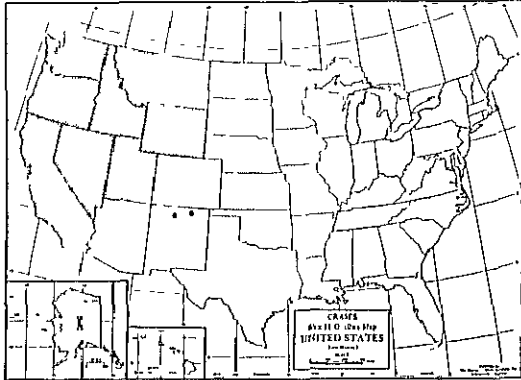
Plagiobothrys scouleri (Hook. & Arn.) I. Johnst.

Family: Borage (Boraginaceae)

May-August

Field Marks: This species differs from others in the genus by having the leaves toward the base of the stem opposite and with appressed hairs, petals less than 1/4 inch long, and symmetrical sepals





Local Notes:

Habitat: Moist, poorly drained soil, including alkaline habitats.

Habit: Prostrate annual with a taproot or fibrous roots.

Stems: Usually prostrate but turning upward at the tip, up to 8 inches long, usually with appressed hairs.

Leaves: Lower leaves opposite, upper leaves alternate, linear, up to 3 inches long, up to 1/4 inch wide, with appressed hairs, without teeth.

Flowers: Borne on one side of the upper end of the stem, the stem usually upturned and even slightly coiled at the tip.

Sepals: 5, symmetrical, green, united below, hairy, up to 1/6 inch long.

Petals: 5, white, united below, usually a little longer than the sepals.

Stamens: 5.

Pistils: Ovary superior, 4-parted, hairy.

Fruits: Nutlets usually 4, ovoid to lanceoloid, up to 1/8 inch long, wrinkled, usually somewhat bristly.

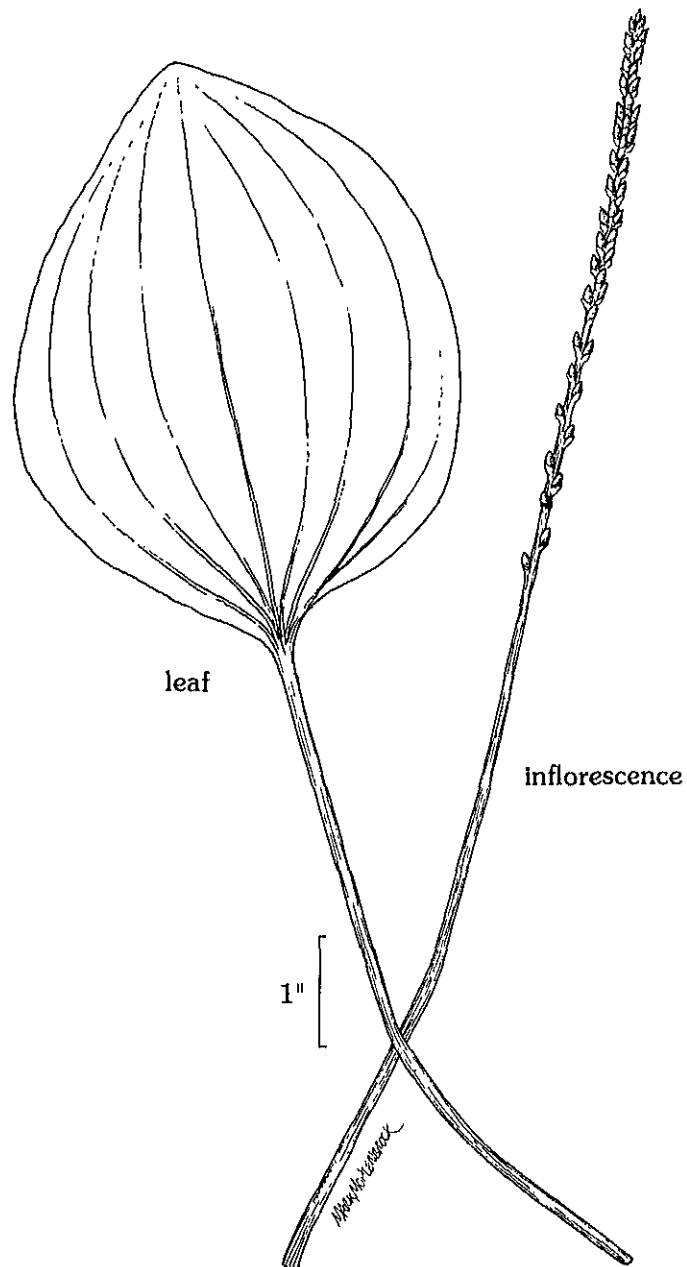
Common Plantain

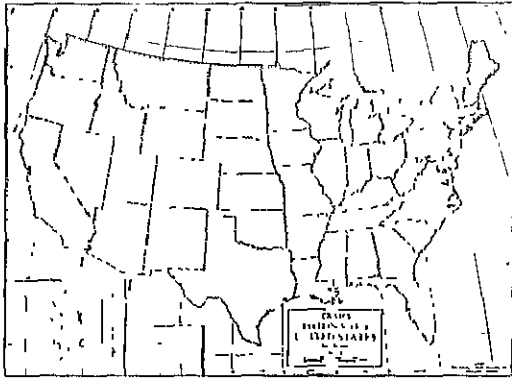
Plantago major L.

Family: Plantain (Plantaginaceae)

May-October

Field Marks: This plantain differs by its broad leaves, continuous cylindrical spikes, and green instead of wine-colored leaf stalks.





Local Notes:



Habitat: Disturbed areas, often becoming an aggressive weed in lawns.

Habit: Perennial herb with a thickened rootstock and with fibrous roots.

Stems: None except for the leafless stalk that bears the cylindrical spike of flowers.

Leaves: All basal, broadly elliptic to ovate, up to 6 inches long, up to 4 inches wide, pointed or occasionally more or less rounded at the tip, rounded or heart-shaped at the base, usually with some hairs, conspicuously veiny; leaf stalks green, not wine-colored.

Flowers: Crowded into cylindrical spikes at the tip of leafless stems; spikes up to 12 inches long, less than 1/2 inch thick; each flower subtended by a bract up to 1/6 inch long.

Sepals: 4, united below, green.

Petals: 4, united below, nearly transparent, the lobes about 1/20 inch long and turned downward.

Stamens: 4.

Pistils: Ovary superior; stigmas 2-lobed.

Fruits: Capsules more or less spherical, up to 1/6 inch in diameter, smooth, containing 6-30 seeds; seeds ovoid, about 1/20 inch long, brown or black, conspicuously net-veined.

Notes: This species can be an unsightly weed in lawns.

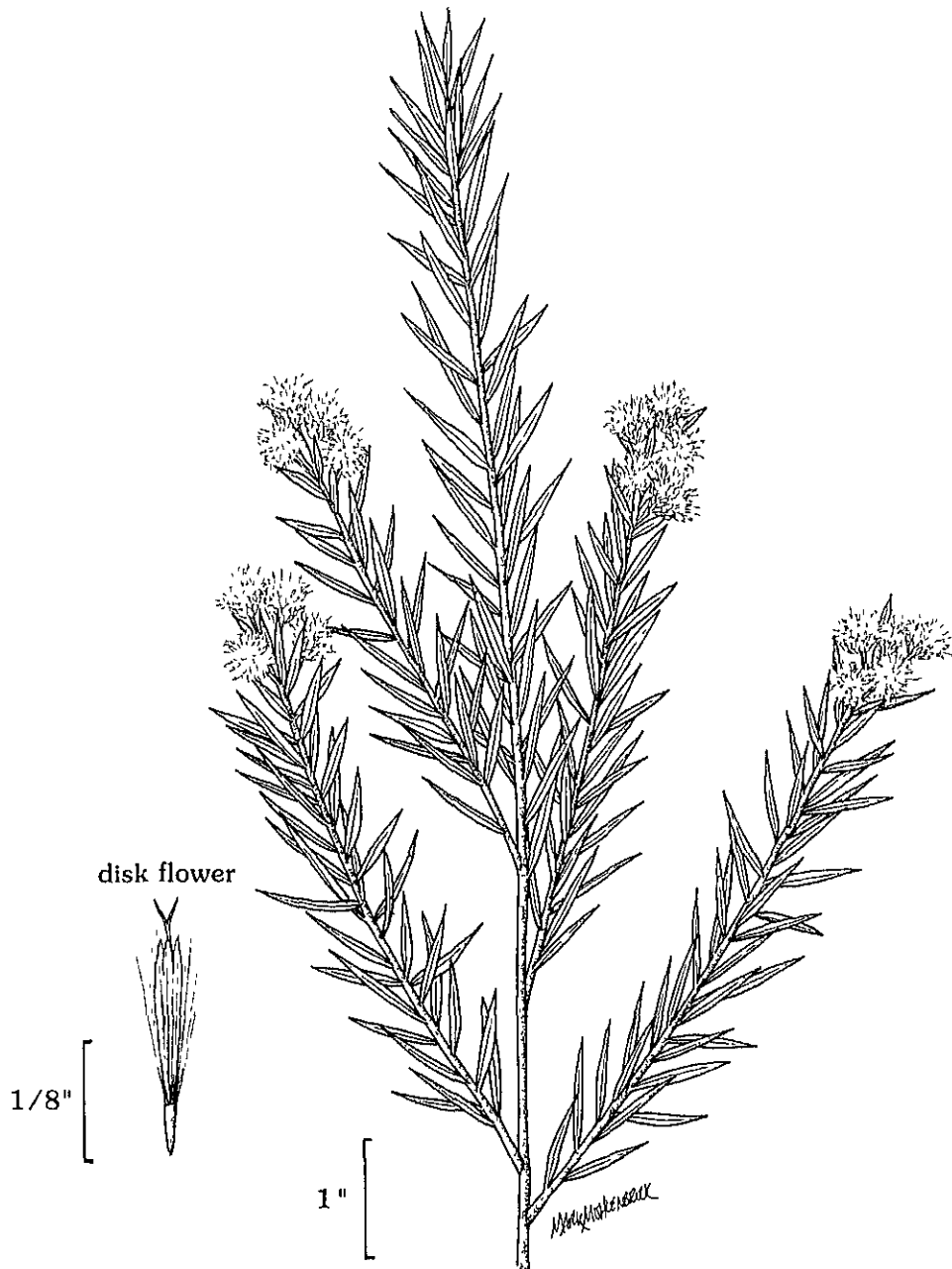
Arrow-weed

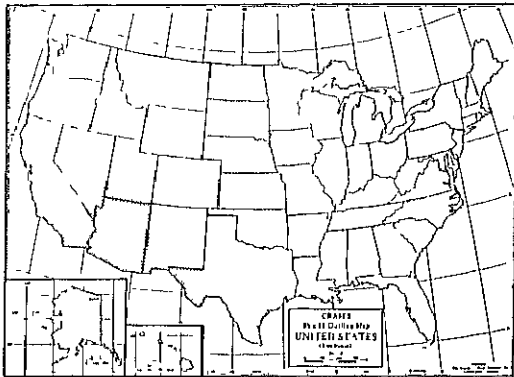
Pluchea sericea (Nutt.) Coville

Family: Composite (Compositae)

March-December

Field Marks: This is a willow-like shrub that has purple flower heads consisting only of disk flowers. The leaves are linear-lanceolate to lanceolate.





Local Notes:



Habitat: Along waterways, often in the desert.

Habit: Willow-like shrub up to 15 feet tall

Stems: Slender, smooth, grayish.

Leaves: Alternate, simple, leathery, linear-lanceolate to lanceolate, up to 2 inches long, up to 1/3 inch wide, pointed at the tip, tapering to the base, silvery-silky hairy, without teeth, with 1 vein.

Flowers: Crowded into heads, each head consisting only of purple disk flowers; bracts subtending each head ovate to lanceolate, leathery, up to 1/3 inch long.

Sepals: 0.

Petals: 5, united to form purple disk flowers.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Achenes smooth, with a tuft of soft bristles at the tip, each bristle somewhat swollen at the tip.

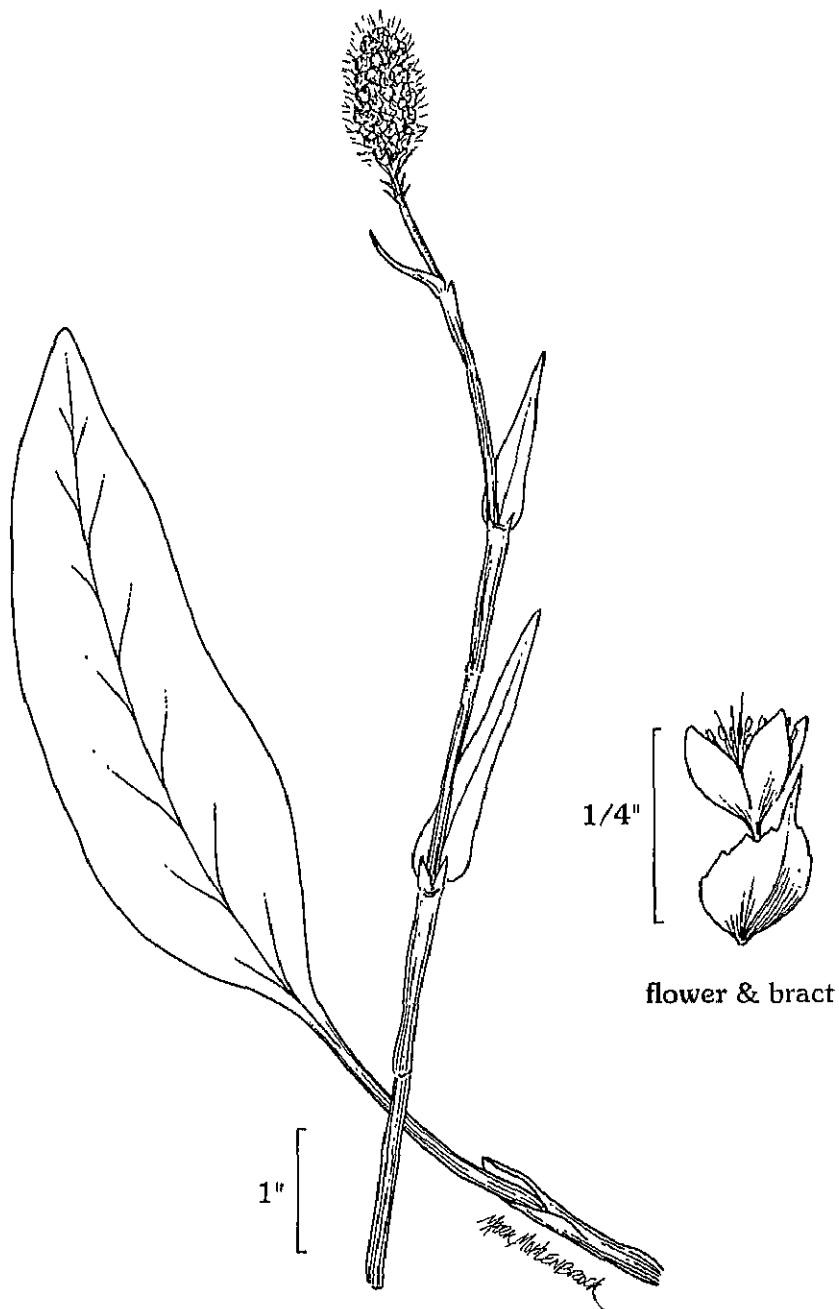
American Bistort

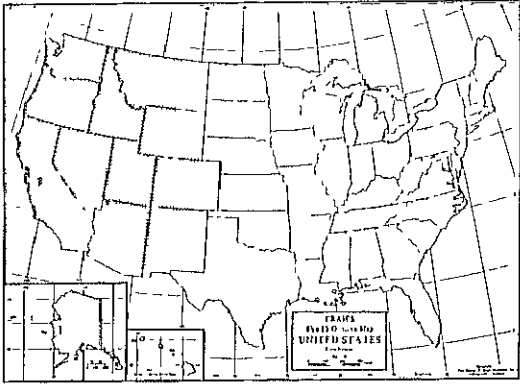
Polygonum bistortoides Pursh

Family: Smartweed (Polygonaceae)

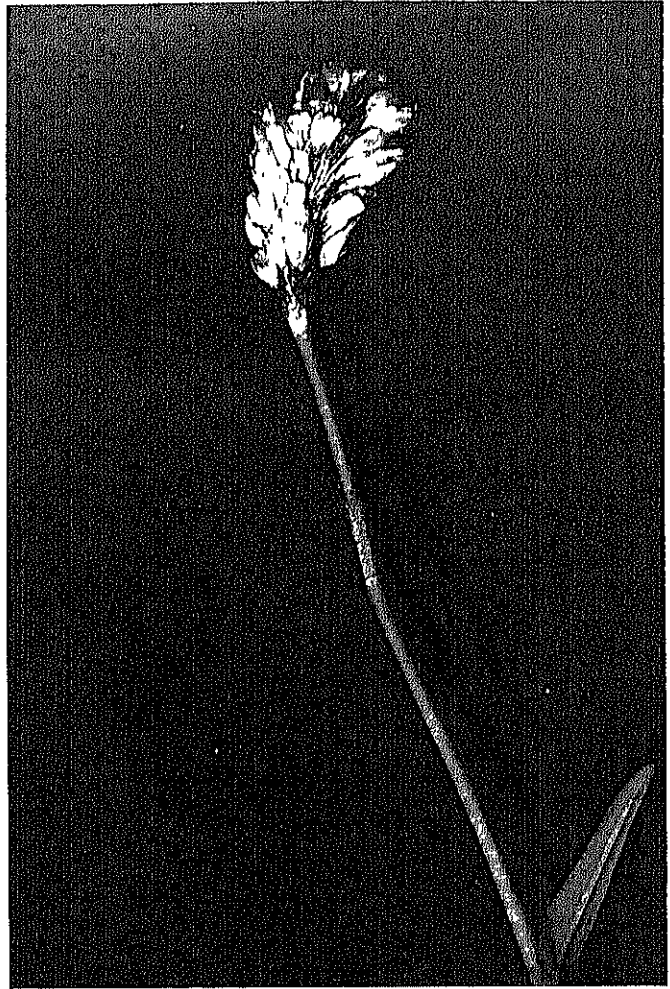
May-August

Field Marks: American bistort differs from all other species of *Polygonum* by its long-stalked basal leaves, its unbranched stem, and its thick, solitary, spike-like raceme.





Local Notes:



Habitat: Along streams, in wet meadows, particularly in the mountains

Habit: Perennial herb from a thick, fleshy rootstock.

Stems: Upright, unbranched, up to 1 1/2 feet tall, smooth.

Leaves: Basal and alternate, smooth, without teeth, the lowermost oblong to oblanceolate, pointed or rounded at the tip, up to 10 inches long, up to 2 inches wide, on stalks up to 8 inches long; uppermost leaves similar but sessile.

Flowers: Many crowded into a terminal, solitary, cylindrical, spike-like raceme; raceme up to 3 inches long, up to 3/4 inch wide; flower stalk 1/8-1/3 inch long.

Sepals: 5, united at the base, pink or white, petal-like, up to 1/4 inch long.

Petals: 0.

Stamens: Usually 5-9, exserted beyond the sepals.

Pistils: Ovary superior.

Fruits: Achenes triangular, pale brown, smooth, shiny, up to 1/6 inch long.

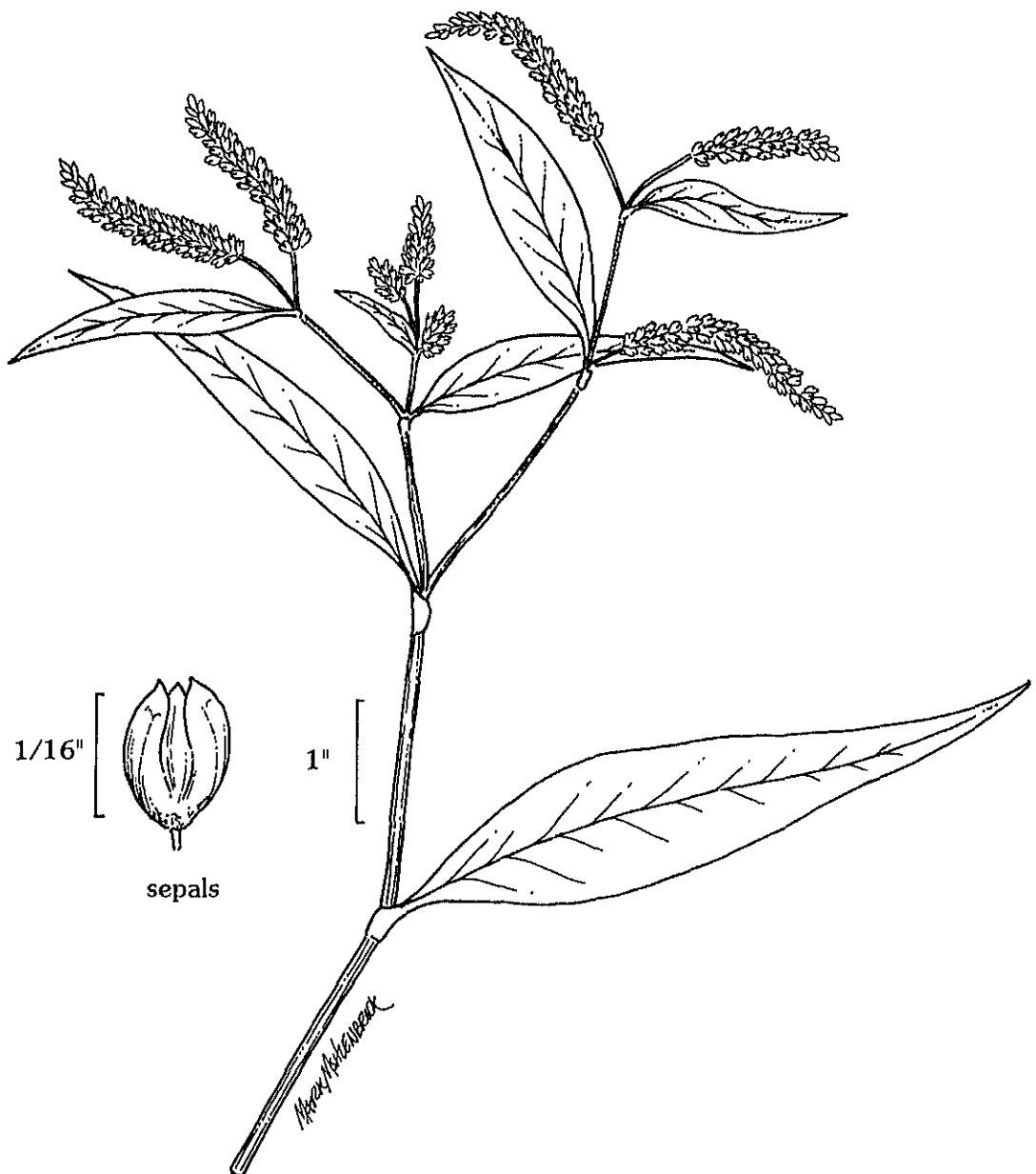
Willow-weed

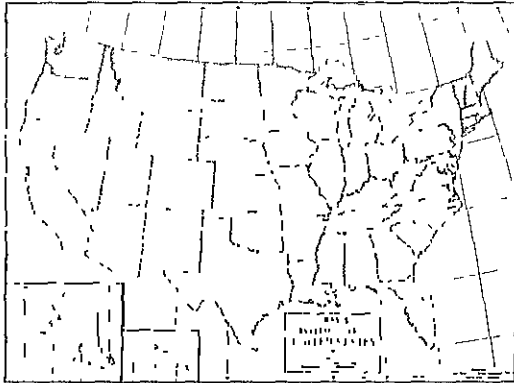
Polygonum lapathifolium L.

Family: Smartweed (Polygonaceae)

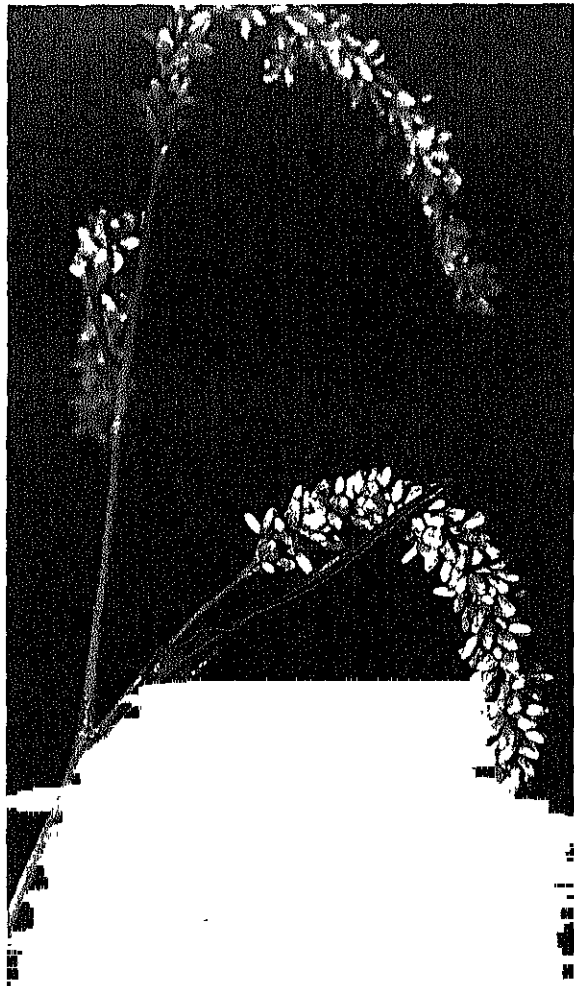
July-October

Field Marks: The racemes of flowers usually drooping, and the sheaths on the stem of the plant are without bristles. The flowers are not bright pink





Local Notes:



Habitat: Moist soil, wet meadows, roadside ditches, often in disturbed areas.

Habit: Erect annual from a taproot.

Stems: Upright, sometimes rather stout, up to 4 feet tall, smooth, the sheaths not bearing bristles at the tip.

Leaves: Alternate, simple, narrowly to broadly lanceolate, up to 8 inches long, up to 1 1/2 inches wide, pointed at the tip, tapering to the base, usually smooth, often with glandular dots on the lower surface.

Flowers: Many in few to several drooping racemes, the racemes up to 3 inches long, up to 1/2 inch broad, their stalks sometimes with stalked glands.

Sepals: 6, partly united, white, greenish, or pale-pink, petal-like, 3-veined.

Petals: 0.

Stamens: Usually 9.

Pistils: Ovary superior; styles 2, free to the base.

Fruits: Achenes lenticular, shiny, 1/8-1/6 inch long.

Notes: The achenes are eaten by waterfowl.

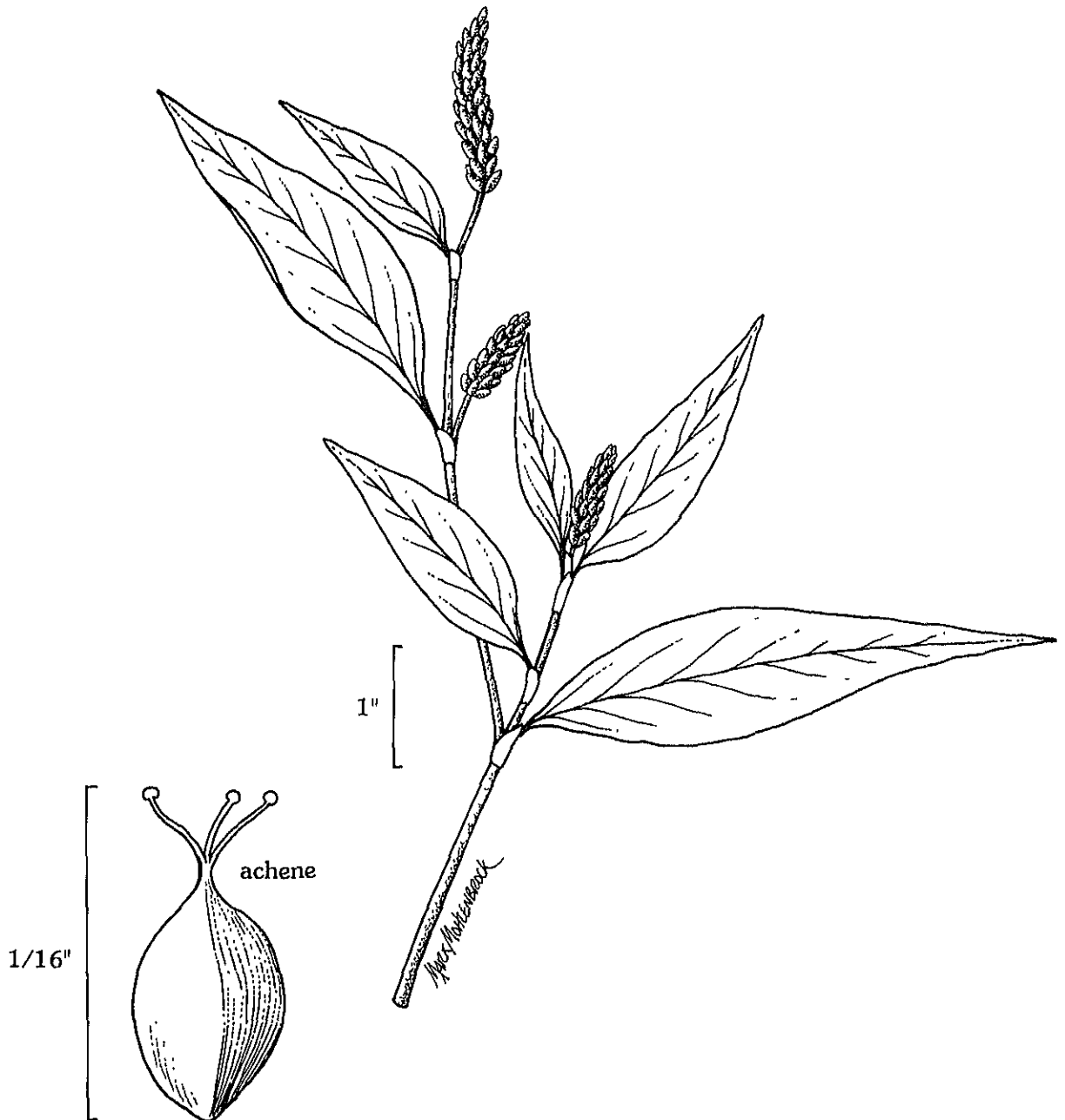
Lady's Thumb

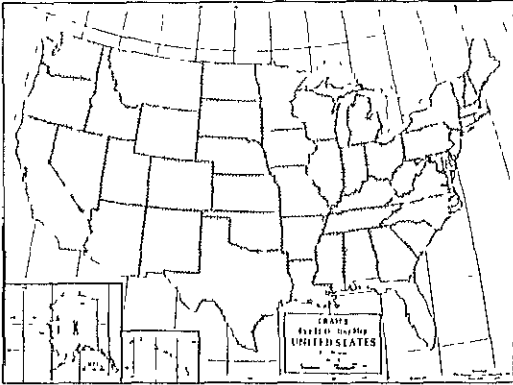
Polygonum persicaria L.

Family: Smartweed (Polygonaceae)

June-November

Field Marks: This species differs from similar smartweeds by its bristly sheaths, dense, erect spikes of pinkish flowers, and its annual habit.





Local Notes:

Habitat: Moist, disturbed areas.

Habit: Annual herb with a taproot.

Stems: Upright or ascending, branched, up to 3 feet tall, usually smooth; sheaths bristly at the tip.

Leaves: Alternate, simple, lanceolate to linear-lanceolate, up to 5 inches long, up to 3/4 inch wide, pointed at the tip, tapering to the nearly sessile base, usually smooth.

Flowers: Many crowded in dense racemes, the racemes erect, up to 1 1/2 inches long, on smooth stalks.

Sepals: Usually 5, united below, usually pinkish, up to 1/6 inch long.

Petals: 0.

Stamens: 6-9.

Pistils: Ovary superior; styles usually 2.

Fruits: Achenes triangular or sometimes flattened, 1/8-1/6 inch long, smooth, shiny.

Notes: The distinctive blotch present on many of the leaves of the lady's thumb may also be present in other species of *Polygonum*. The achenes are eaten by waterfowl and small mammals

Dotted Smartweed

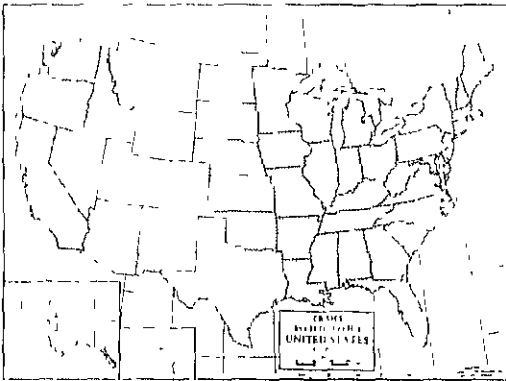
Polygonum punctatum Elliott

Family: Smartweed (Polygonaceae)

July-October

Field Marks: This species is readily distinguished by the black dots on the white sepals and the bristly sheaths on the stem.





Local Notes:



Habitat: Wet soil, wet meadows, marshes, roadside ditches, around lakes and ponds.

Habit: Erect perennial, but with the lower branches sometimes rooting at the nodes, usually bearing rhizomes and stolons

Stems: Upright, usually rather slender, up to 3 feet tall, but usually shorter, usually smooth, the sheath bearing bristles at the top.

Leaves: Alternate, simple, elliptic to lanceolate, up to 4 inches long, up to 3/4 inch wide, pointed at the tip, tapering to the base, usually smooth, or occasionally strigose on the lower surface.

Flowers: Many in arching or erect, interrupted racemes, the racemes up to 4 inches long, about 1/4 inch broad.

Sepals: 6, partly united, white to greenish white, petal-like, the surface covered with black dots.

Petals: 0.

Stamens: Usually 9.

Pistils: Ovary superior; styles 2 or 3.

Fruits: Achenes black, shiny, lenticular to 3-angled

Notes: The achenes are eaten by waterfowl.

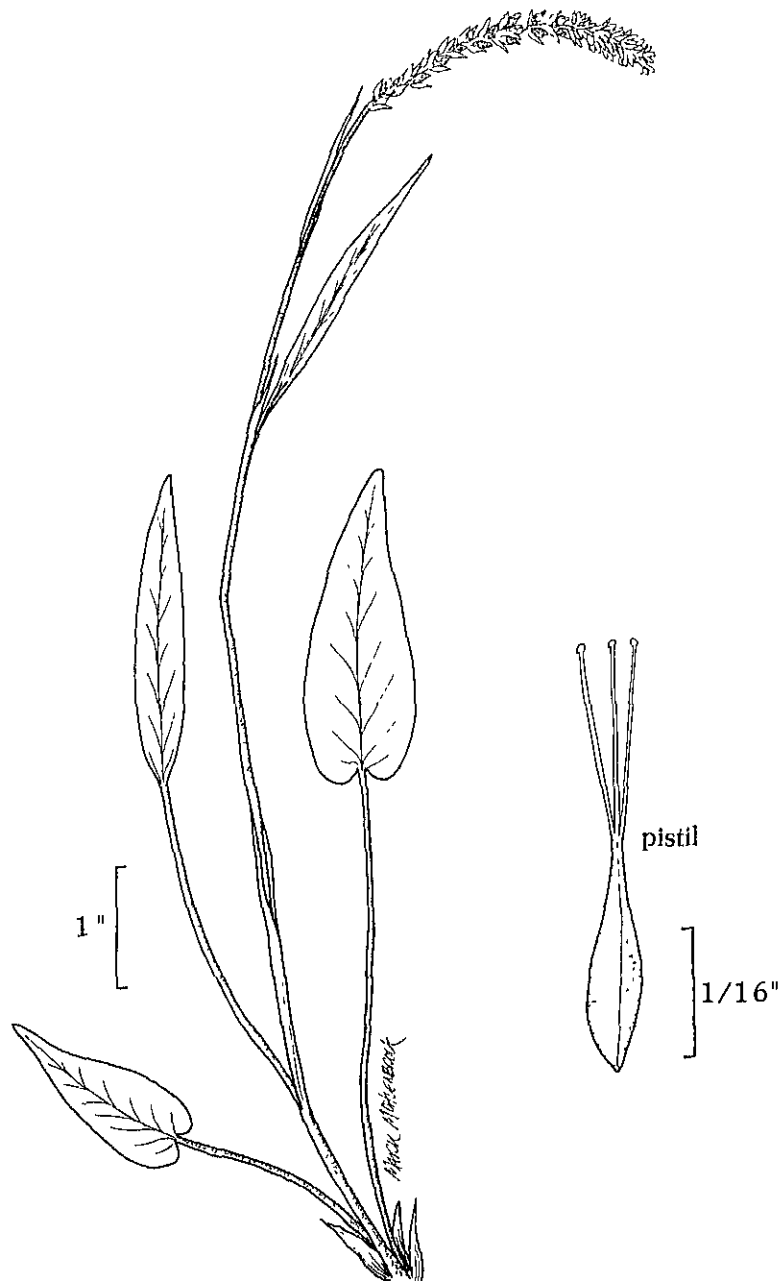
Viviparous Knotweed

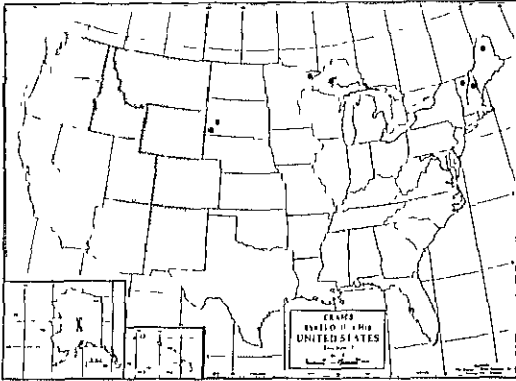
Polygonum viviparum L.

Family: Smartweed (Polygonaceae)

June-August

Field Marks: This species is readily recognized by the spike-like racemes of white or pinkish flowers with bulblets present in the axils of the lowest bracts. Almost all the leaves are basal





Local Notes:



Habitat: Moist habitats, sometimes in alkaline soil

Habit: Perennial herb with an erect rhizome.

Stems: Upright, unbranched, up to 1 foot tall, smooth

Leaves: Almost all basal, linear to oblong-lanceolate, up to 3 1/2 inches long, up to 3/4 inch wide, rounded or pointed at the tip, more or less heart-shaped at the base, smooth, on stalks as long as the blades, leaves on the stem few, alternate, linear-lanceolate, the uppermost sessile

Flowers: Several in a single spike-like raceme up to 2 1/2 inches long, the lower bracts bearing reddish bulblets in their axils

Sepals: 5, white or pink, united at the base.

Petals: 0.

Stamens: Usually 5, exserted beyond the sepals.

Pistils: Ovary superior; styles 3.

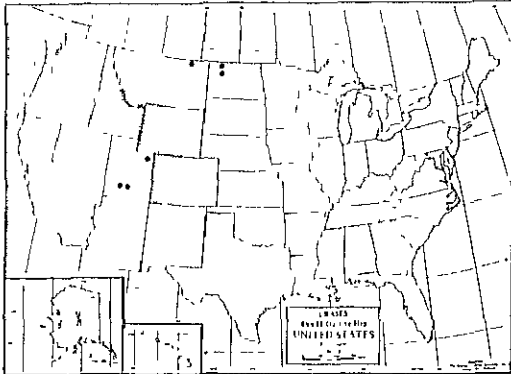
Fruits: Achenes triangular, dark brown, not shiny.

Notes: Most of the flowers fail to produce viable seeds.

Primula incana M.E. Jones

June-August

A botanical line drawing consisting of two parts. The upper part shows a single flower with five petals and a long tube, labeled "flower". To its left is a vertical bracket indicating a size of "1/4\". The lower part shows the entire plant, which has a basal rosette of several leaves and a very tall, slender stem topped by a cluster of small flowers. A vertical bracket next to the stem indicates a height of "1\". The artist's signature "M. H. H. H. B." is visible near the base of the plant.



Local Notes:



Habitat: Wet meadows, along streams, in swamps.

Habit: Perennial herb with fibrous roots.

Stems: Upright, without leaves, unbranched, up to 15 inches tall, bearing only flowers.

Leaves: All basal, oblanceolate, up to 3 1/2 inches long, up to 1 inch wide, more or less rounded at the tip, tapering to the base, white-mealy on the lower surface, with or without a few teeth.

Flowers: 3-12 at the tip of a leafless stem, subtended by bracts 1/4-1/2 inch long.

Sepals: 5, green, united below, 1/3-1/2 inch long, the tube about twice as long as the lobes.

Petals: 5, white to lilac, united below, deeply lobed, 1/3-1/2 inch long.

Stamens: 5, attached to the tube of the petals.

Pistils: Ovary superior, smooth.

Fruits: Capsules ovoid, smooth, up to 1/2 inch long; seeds numerous.

Notes: The leaves may be browsed by deer.

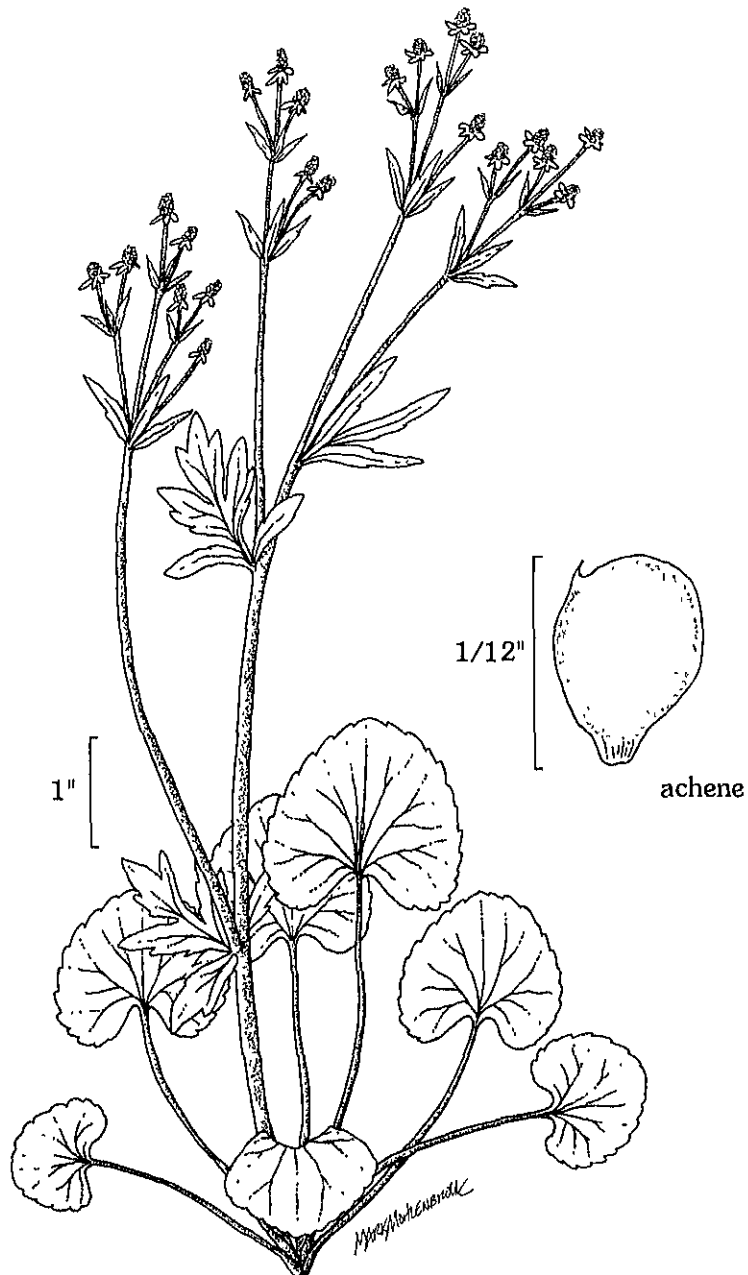
Subalpine Butter-cup

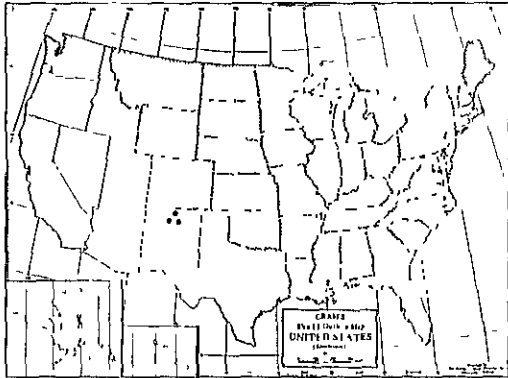
Ranunculus abortivus L.

Family: Butter-cup (Ranunculaceae)

March-July

Field Marks: This *Ranunculus* has all the basal leaves unlobed and undivided and some or all of the cauline leaves 3- or 5-parted, petals shorter than the sepals, and basal leaves heart-shaped at the base.





Local Notes:

Habitat: Moist woods, common in floodplains.

Habit: Biennial or perennial herb with thread-like rhizomes.

Stems: Upright, branched, hollow, up to 20 inches tall, usually smooth but occasionally somewhat hairy.

Leaves: Basal leaves all simple, unlobed and undivided although sometimes with rounded teeth, up to 2 1/2 inches long, heart-shaped at the base, smooth, on stalks up to 6 inches long; cauline leaves 3- or 5-parted, sessile or nearly so, smooth.

Flowers: Several, up to 1/3 inch across

Sepals: 5, free from each other, greenish yellow, up to 1/6 inch long, smooth or with short, stiff hairs.

Petals: 5, free from each other, yellow, up to 1/8 inch long, shorter than the sepals.

Stamens: 15-30.

Pistils: Many in each flower, each with a superior ovary.

Fruits: Achenes many in a head, the head up to 1/3 inch long, each achene obovoid, up to 1/12 inch long, with a minute beak.

Notes: The common name used for this plant in this book is inappropriate.

Dwarf Butter-cup

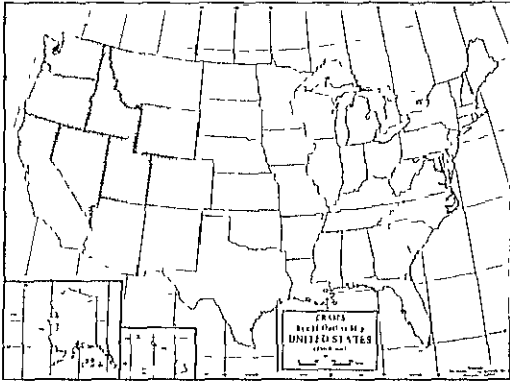
Ranunculus alismifolius Geyer ex Benth.

Family: Butter-cup (Ranunculaceae)

April-June

Field Marks: The bright yellow petals are up to 1/2 inch long, about 3 times as long as the sepals. All the leaves are smooth and lanceolate.





Local Notes:

Habitat: Around lakes, along streams, wet meadows, roadside ditches.

Habit: Perennial herb with several thickened roots.

Stems: Upright, often branched, usually rather stout, up to 2 1/2 feet tall, smooth, hollow

Leaves: Basal leaves and alternate cauline leaves both present, lanceolate, rounded or pointed at the tip, tapering to a long leaf stalk, up to 4 inches long, up to 1 1/2 inches wide, usually without teeth or lobes, smooth.

Flowers: 1-few at the tips of the branches, up to nearly 1 inch across on smooth stalks up to 4 inches long.

Sepals: 5, yellow-green, free from each other, about 1/8 inch long, up to 1/3 as long as the petals.

Petals: 5, bright yellow, free from each other, obovate, 3 times longer than the sepals.

Stamens: Numerous.

Pistils: 30-50 in a rather compact cluster, each with a superior ovary, smooth.

Fruits: Achenes 30-50 in a small spherical head, each achene obovoid, up to 1/8 inch long, with a short, curved or straight beak.

Notes: The leaves are reminiscent of those of *Alisma graminea*. The common name is not particularly appropriate for this species. The achenes are eaten by small birds and small mammals.

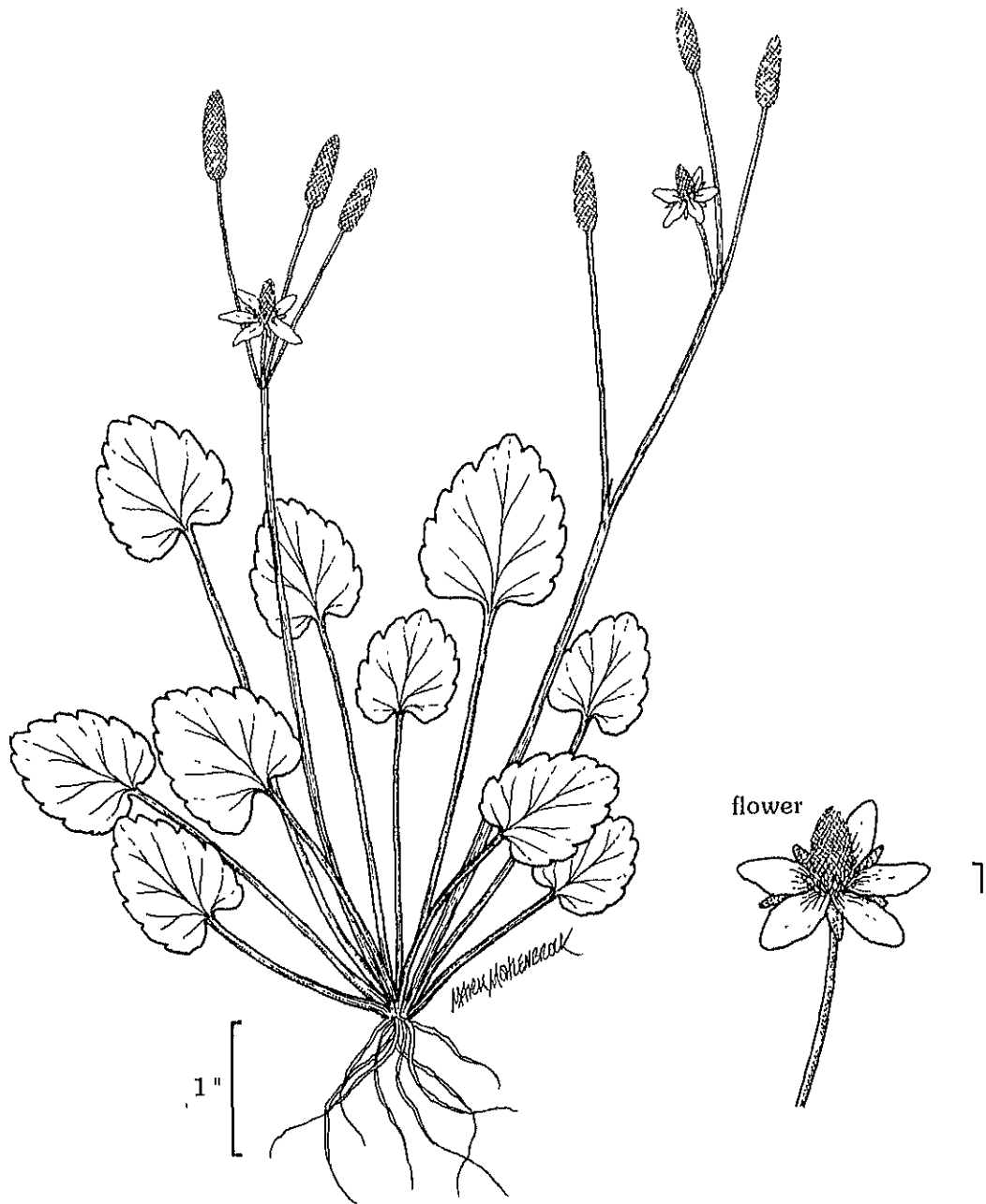
Seaside Butter-cup

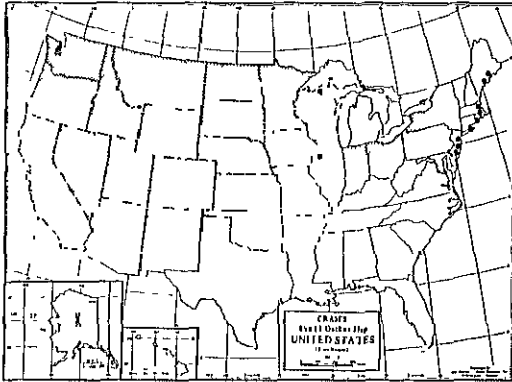
Ranunculus cymbalaria Pursh

Family: Butter-cup (Ranunculaceae)

May-September

Field Marks: This yellow-flowered butter-cup is recognized by its achenes which have 4 vertical stripes. The cylindrical fruting heads are about twice as long as wide.





Local Notes:

Habitat: Along streams, in marshes, around springs, sometimes in alkaline areas.

Habit: Perennial herb with fibrous roots and slender stolons.

Stems: Upright, branched or unbranched, up to 1 foot tall, smooth.

Leaves: Basal and alternate, simple, ovate to somewhat kidney-shaped, rounded at the tip, rounded or heart-shaped at the base, smooth, shallowly toothed or shallowly 3-lobed, up to 1 3/4 inches long, up to 1 inch wide; stalks up to 3 inches long.

Flowers: 1-few at the tip of the stem, on stalks up to 1 1/2 inches long.

Sepals: 5, greenish yellow, free from each other, elliptic, up to 1/4 inch long, smooth, falling away early.

Petals: Usually 5, yellow, free from each other, obovate, up to 1/3 inch long, up to 1/8 inch wide.

Stamens: 10-30.

Pistils: Very numerous in a cylindrical head, the head 1/2-3/4 inch long, 1/8-1/3 inch thick; ovaries superior.

Fruits: Achenes very numerous in a cylindrical head, each achene oblong but tapering to the base, up to 1/8 inch long, with 4 vertical stripes, with a very short, straight beak.

Notes: The achenes are eaten by small birds

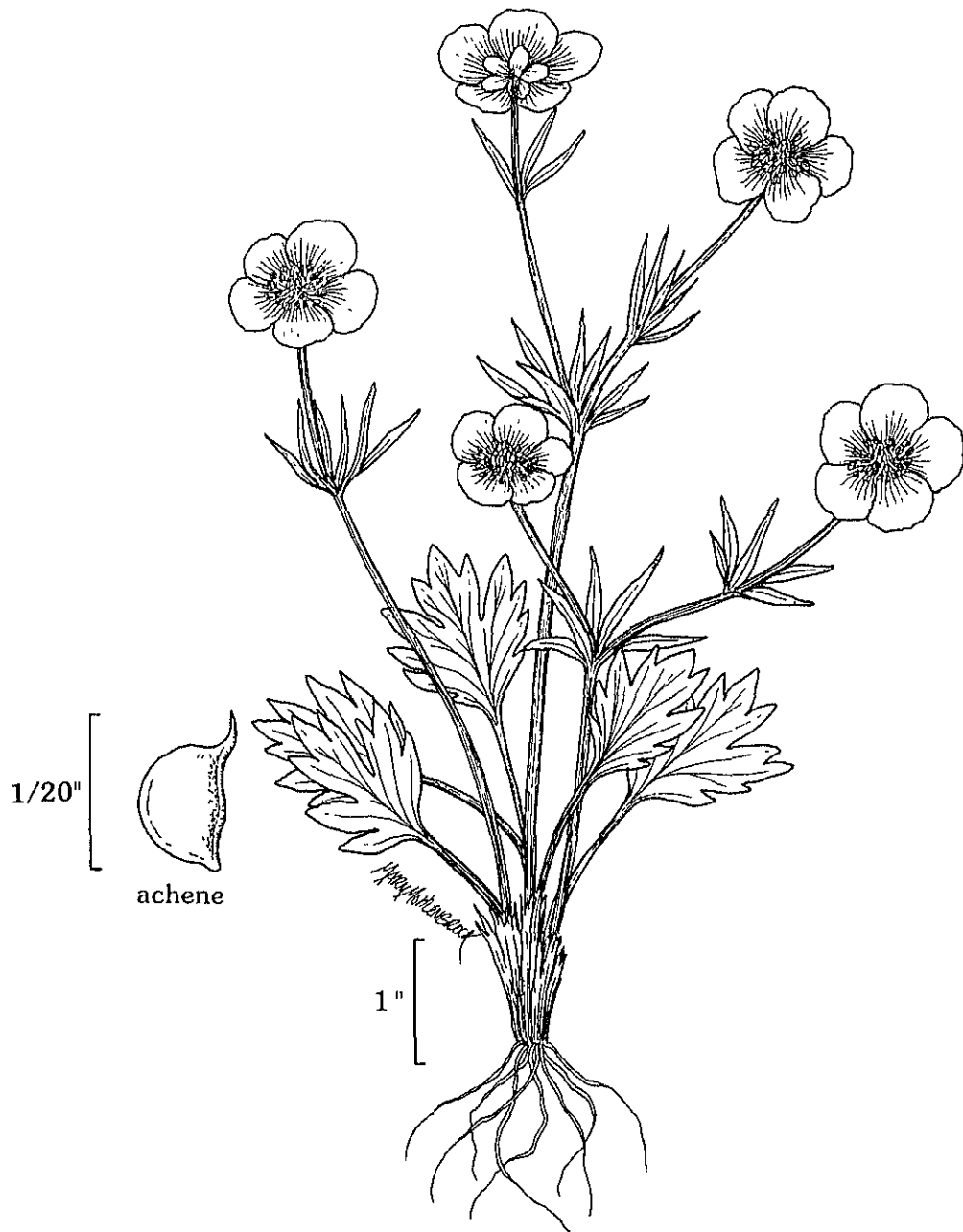
Eschscholtz Butter-cup

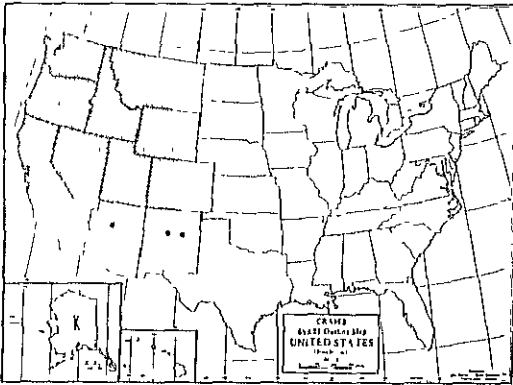
Ranunculus eschscholtzii Schlecht.

Family: Butter-cup (Ranunculaceae)

July-August

Field Marks: This butter-cup has deeply 3-parted leaves, 5 yellow petals 1/4-1/2 inch long, an elongated, cylindrical fruiting head, and a very tiny achene with a slender beak.





Local Notes:

Habitat: Moist meadows, moist rocky areas.

Habit: Perennial herb with a thickened crown and fibrous roots.

Stems: Upright, usually unbranched, up to 1 foot tall, smooth.

Leaves: Mostly basal with a few on the stem, circular in outline, deeply 3-parted, up to 1 1/2 inches wide; stalks up to 3 inches long.

Flowers: 1-few at the tip of the stems, on stalks up to 4 inches long.

Sepals: 5, yellow tinged with lavender, free from each other, 1/6-1/3 inch long, smooth or sparsely hairy.

Petals: 5, yellow, free from each other, obovate, 1/3-1/2 inch long.

Stamens: 20-40.

Pistils: Many in an ovoid head, the ovaries superior.

Fruits: Achenes many in an ovoid head 1/2-3/4 inch long, 1/4-1/3 inch thick, each achene oblongoid, about 1/20 inch long, with a slender beak.

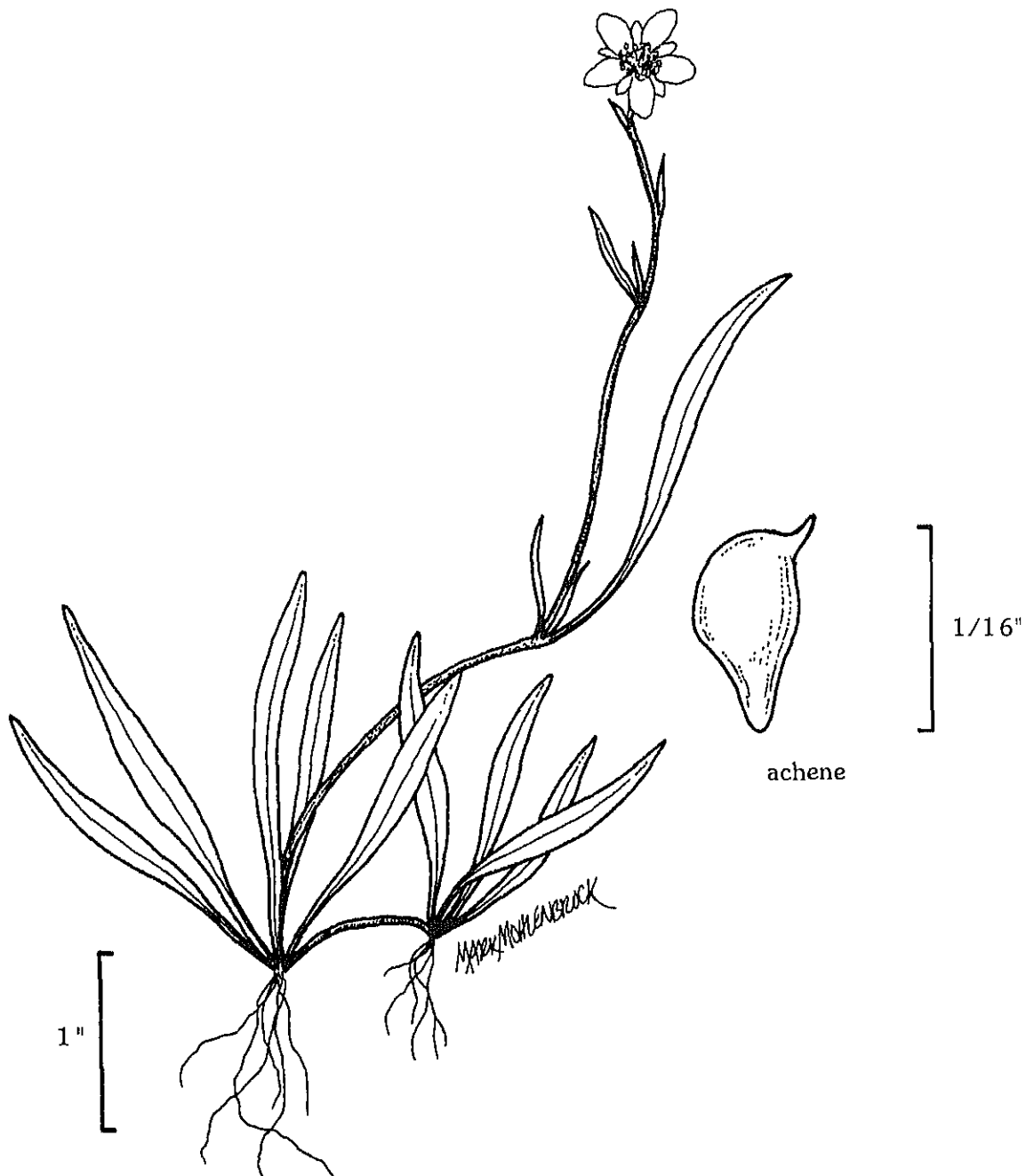
Notes: The achenes are eaten by small animals.

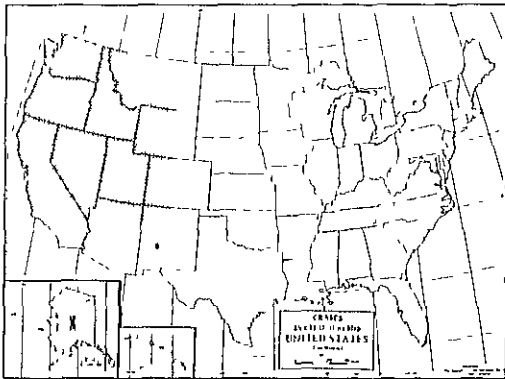
Ranunculus flammula L.

Family: Butter-cup (Ranunculaceae)

July-August

Field Marks: This butter-cup has simple, toothless and unlobed, smooth leaves, stems that root at the nodes, and sepals up to 1/4 inch long.





Local Notes:



Habitat: Marshes, wet meadows.

Habit: Sprawling perennial herb rooting at the nodes.

Stems: Sprawling, rooting at the nodes, usually smooth, slender, up to 1 1/2 feet long.

Leaves: Simple, often clustered at the rooting nodes, narrowly spatulate to oblanceolate, up to 2 1/2 inches long, up to 1/3 inch wide, pointed at the tip, tapering to the base, smooth or nearly so, without teeth or lobes.

Flowers: 1-few clustered at the rooting nodes, on stalks up to 3 inches long.

Sepals: 5, greenish yellow, free from each other, up to 1/4 inch long, sometimes turned downward.

Petals: 5 or 10, bright yellow, free from each other, a little longer than the sepals.

Stamens: 20-30.

Pistils: Many in a rounded head, each with a superior ovary.

Fruits: Achenes 10-25, clustered in a rounded head, each achene up to 1/16 inch long, with a short, curved beak.

Notes: The achenes are eaten by waterfowl.

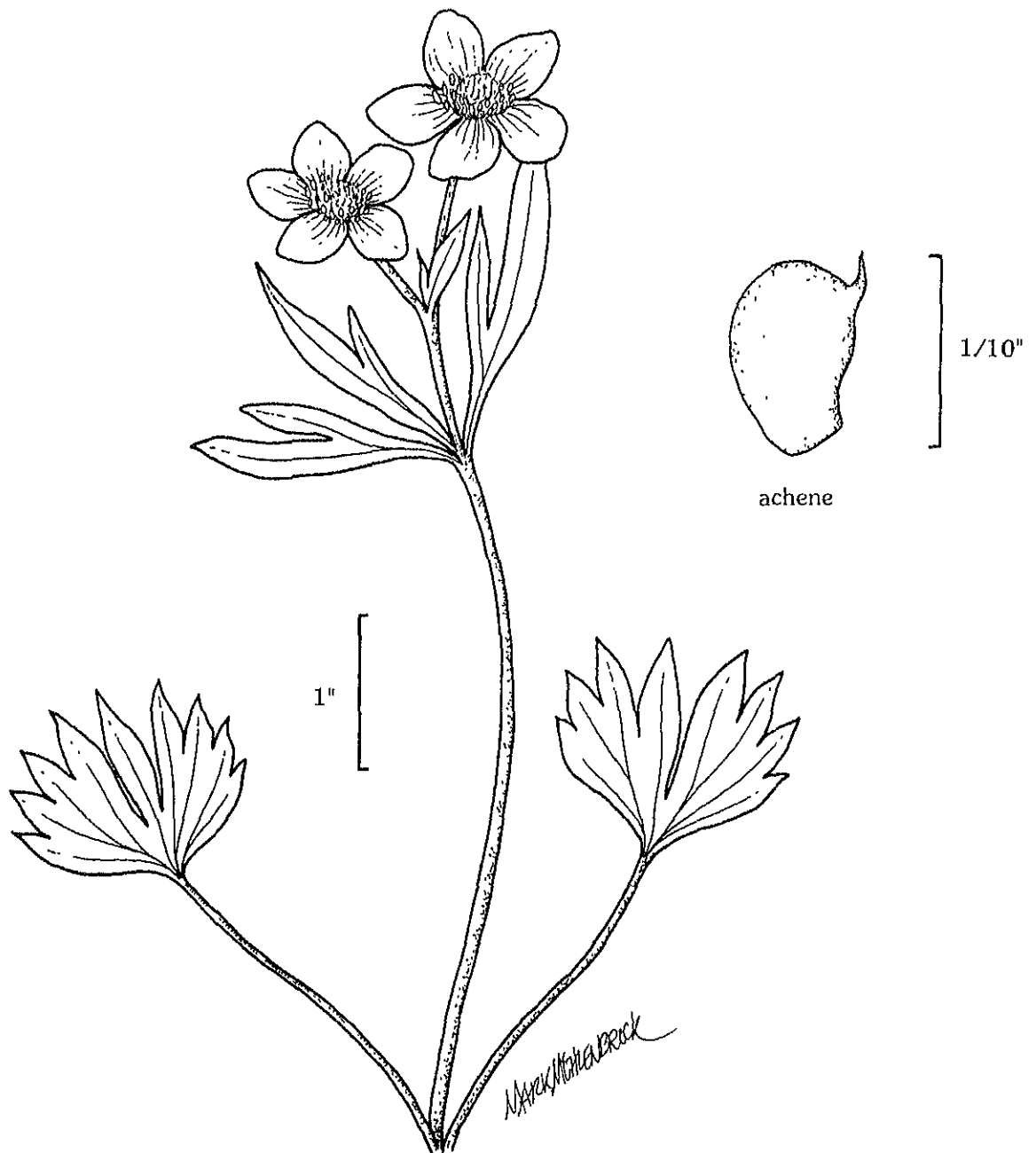
Sagebrush Butter-cup

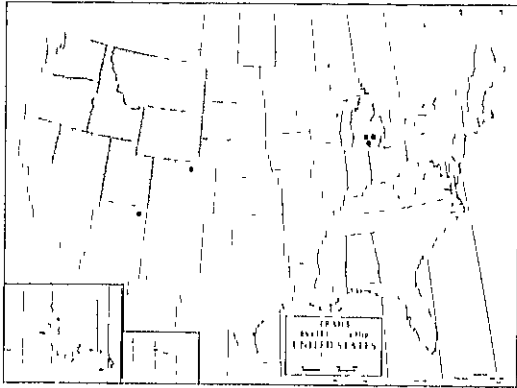
Ranunculus glaberrimus Hook

Family: Butter-cup (Ranunculaceae)

April-June

Field Marks: The characteristics that distinguish this butter-cup from all others are completely smooth stems and leaves, basal leaves usually lobed and coarsely toothed, and round heads of achenes 1/3-1 inch in diameter.





Local Notes:

Habitat: Moist woods, prairies, meadows, even in sagebursh

Habit: Perennial herb with fleshy roots

Stems: Lying flat to upright, usually unbranched, up to 6 inches long, smooth or rarely hairy

Leaves: Mostly all basal, simple, spherical to obovate, often lobed and coarsely toothed, up to 2 inches long, up to 1 1/4 inches wide, usually smooth, on stalks up to 3 inches long; leaves on stem fewer, alternate, narrower, usually 3-parted

Flowers: 1-6 at the tips of usually leafless stalks

Sepals: 5, green or purplish, free from each other, elliptic, 1/6-1/3 inch long, smooth or hairy

Petals: 5, yellow, free from each other, obovate, up to 3/4 inch long.

Stamens: 40-80.

Pistils: Many, free from each other on a conical receptacle, each with a superior ovary.

Fruits: Many achenes crowded into a spherical head, the head 1/3-1 inch in diameter, each achene obovoid, up to 1/10 inch long, usually hairy, with a short, straight beak.

Notes: The achenes are eaten by birds

Pennsylvania Butter-cup

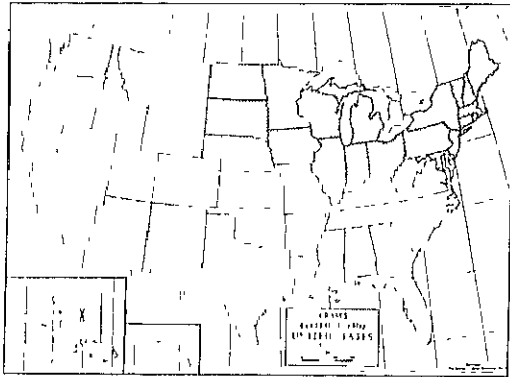
Ranunculus pensylvanicus L. f.

Family: Butter-cup (Ranunculaceae)

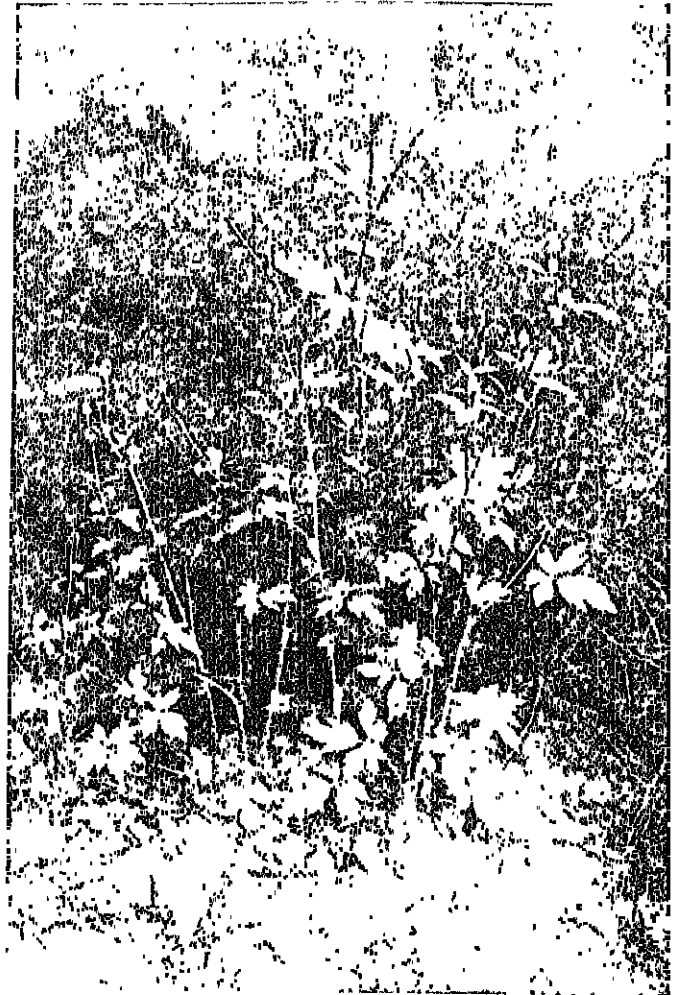
July-August

Field Marks: The yellow petals of this species are a little shorter than the sepals. The flattened achenes are borne in a cylindrical head. The terminal lobe of each leaf is stalked.





Local Notes:



Habitat: Wet meadows, marshes, roadside ditches.

Habit: Perennial herb with thickened roots.

Stems: Upright, branched, up to 2 feet tall, with spreading hairs

Leaves: Basal and alternate, deeply 3-lobed, the terminal lobe stalked, with all the lobes coarsely toothed, hairy.

Flowers: Few near the tips of the stems, borne on short, hairy stalks.

Sepals: 5, green, free from each other, up to 1/6 inch long.

Petals: 5, yellow, free from each other, mostly about 1/8 inch long, never as long as the sepals.

Stamens: Numerous.

Pistils: Several crowded together, each with a superior ovary.

Fruits: Several achenes crowded into a cylindrical head up to 3/4 inch long; each achene flattened, nearly spherical, up to 1/8 inch long, with a flat, pointed, straight or curved beak.

Notes: The achenes are eaten by birds.

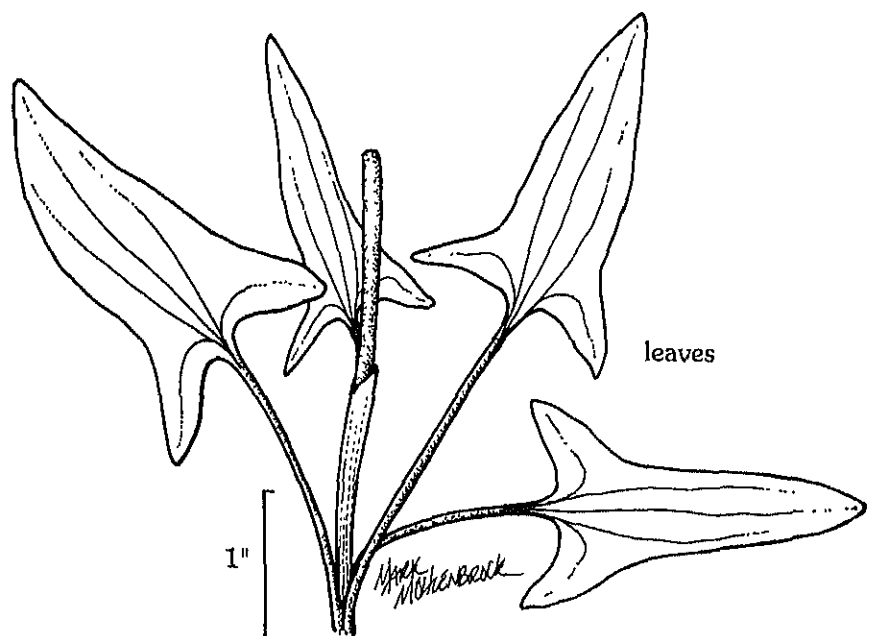
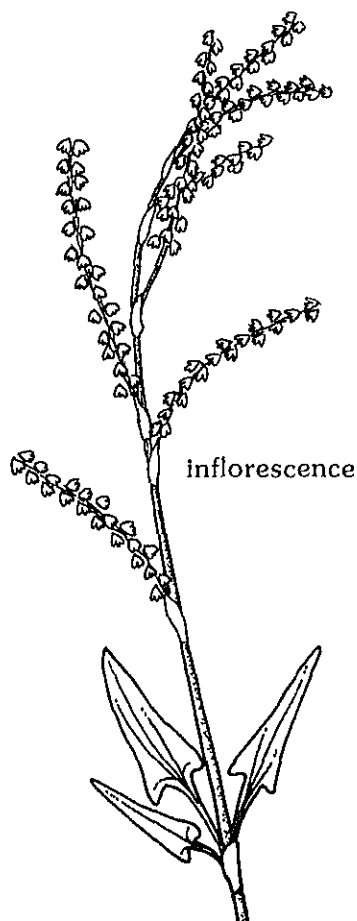
Sheep Sorrel

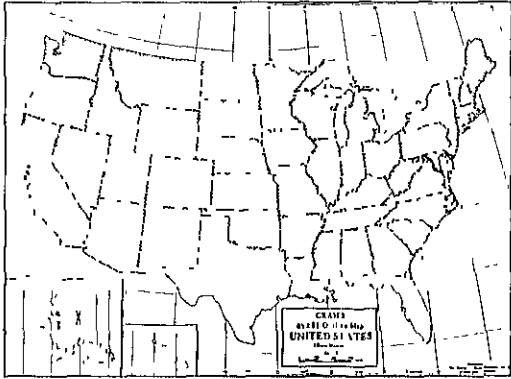
Rumex acetosella L.

Family: Smartweed (Polygonaceae)

April-September

Field Marks: This species of *Rumex* is easily recognized by its hastate basal leaves (that is, the leaves have a pair of basal lobes that project at right angles to the main axis of the blade) and the valves on the fruit the same length as the achene.





Local Notes:



Habitat: Disturbed areas, often in acid soil.

Habit: Perennial herb from slender rhizomes.

Stems: Spreading to ascending, usually unbranched, up to 15 inches long, smooth.

Leaves: Mostly basal, hastate, up to 2 inches long, pointed at the tip, smooth, on long stalks.

Flowers: Very small, in rings (whorls) around the upper part of the stem, the inflorescence slender, up to 6 inches long, yellow or red, with small or no bracts; male and female flowers usually on separate plants.

Sepals: 6, green to yellow to reddish, about 1/20 inch long, united at their base.

Petals: 0.

Stamens: 6.

Pistils: Ovary superior; styles 3.

Fruits: Achenes ellipsoid, about 1/20 inch long, surrounded by 3 valves of about the same length.

Notes: This species is native to Europe. The 3 valves that surround the achene are the persistent inner 3 sepals.

Golden Dock

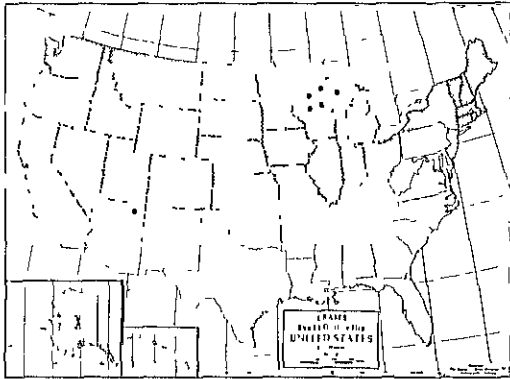
Rumex maritimus L

Family: Smartweed (Polygonaceae)

June-August

Field Marks: This species differs from others in the genus by the valves of the fruit that have spiny teeth along the edges





Local Notes:



Habitat: Around ponds, often near or in brackish water.

Habit: Perennial herb with a thickened rootstock.

Stems: Spreading or ascending, hollow, branched or unbranched, up to 2 feet long, usually with short hairs.

Leaves: Alternate, simple, narrowly oblong to lanceolate, up to 6 inches long, rounded or pointed at the tip, tapering to the base, sometimes with wavy or even toothed edges, usually somewhat hairy.

Flowers: Many in whorls, arranged in large, branched clusters, with several leafy bracts; each flower on a stalk up to 1/6 inch long.

Sepals: 6, united at the base, greenish.

Petals: 0.

Stamens: 6.

Pistils: Ovary superior.

Fruits: Achenes surrounded by the enlarged outer 3 sepals (valves), each valve ovate to triangular, green to golden, up to 1/8 inch long, each valve with a wart-like structure and with spiny teeth along the edges.

Western Dock

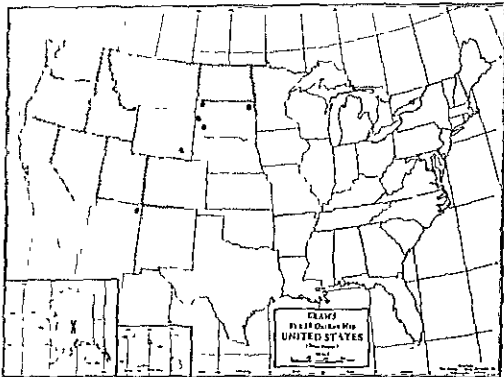
Rumex occidentalis S. Wats.

Family: Smartweed (Polygonaceae)

August-September

Field Marks: The distinguishing features of this dock are that the leaves are heart-shaped at the base, and the valves, which are not more than 1 inch long, have no wart-like tubercles.





Local Notes:



Habitat: Marshes.

Habit: Perennial herb with a taproot.

Stems: Upright, stout, branched or unbranched, up to 4 1/2 feet tall, smooth.

Leaves: Alternate and basal, lanceolate to lance-ovate, up to 16 inches long, rounded or pointed at the tip, heart-shaped at the base, wavy along the margin, smooth, on long stalks; upper leaves smaller.

Flowers: Borne in whorls usually arranged in a dense panicle, the panicle up to 2 feet long; flower stalks 1/4-3/4 inch long.

Sepals: 6, the outer 3 united at the base, green but becoming rose during fruiting.

Petals: 0.

Stamens: 6.

Pistils: Ovary superior; styles 3.

Fruits: Nutlets triangular, closely enclosed by the inner 3 sepals (valves), the valves up to 1/4 inch long, veiny, rose-colored, without bristles or wart-like tubercles, more or less heart-shaped at the base.

Notes: The fruits are eaten by waterfowl.

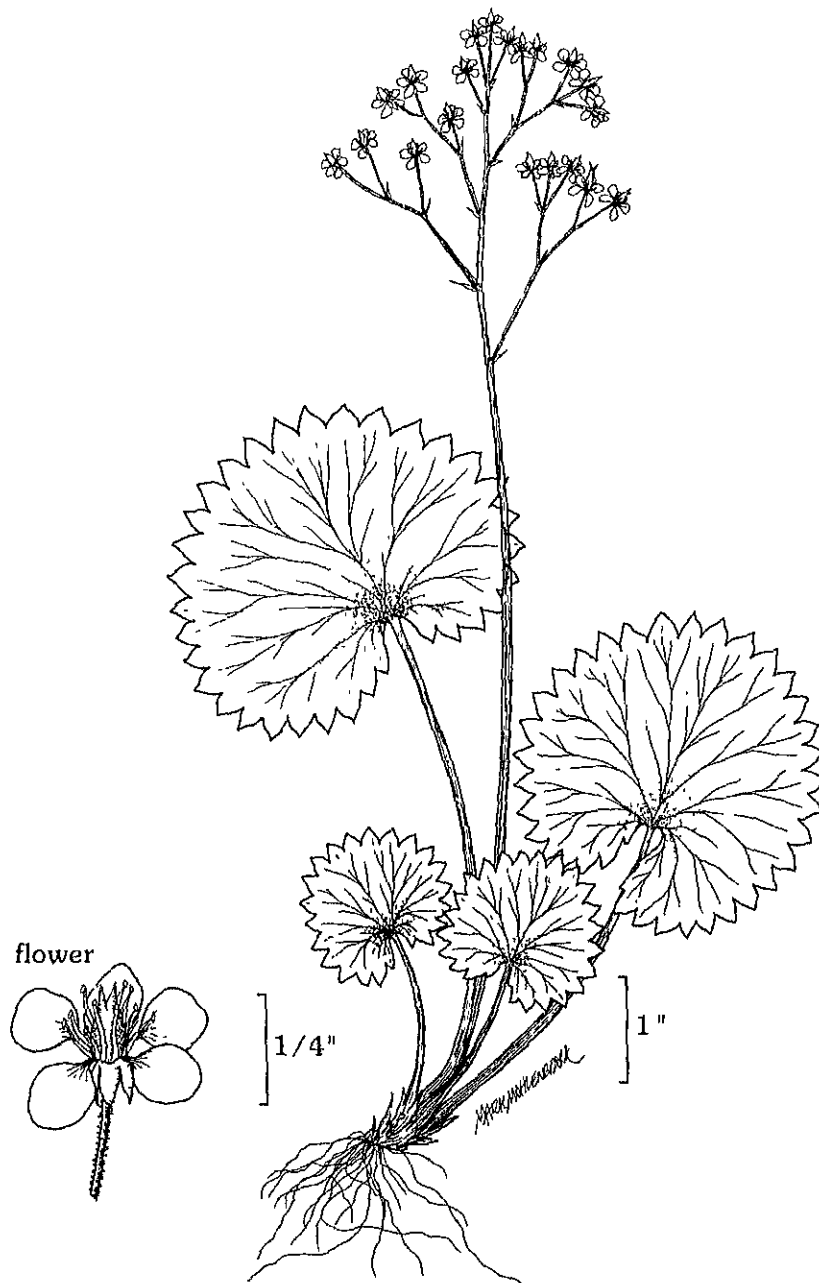
Brook Saxifrage

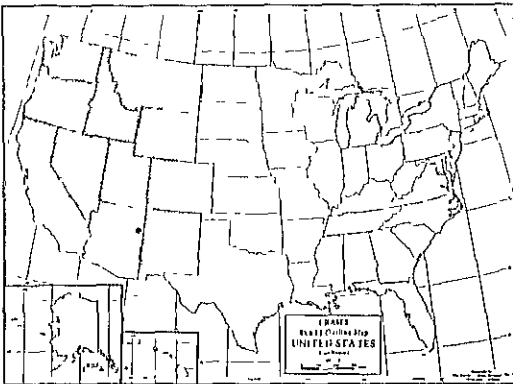
Saxifraga arguta D. Don

Family: Saxifrage (Saxifragaceae)

July-August

Field Marks: This saxifrage has nearly round leaves, white flowers borne in an open panicle, and nearly round petals with slender claws at the base





Local Notes:

Habitat: Along streams in the mountains.

Habit: Perennial herb with rhizomes.

Stems: Bearing only flowers and no leaves, up to 6 inches long, smooth or glandular-hairy near the tip.

Leaves: All basal, nearly round, up to 3 1/2 inches across, heart-shaped at the base, coarsely toothed, smooth; leaf stalks slender, up to 8 inches long.

Flowers: Few to several in an open panicle on a leafless stem, the branchlets of the panicle sometimes purplish and minutely glandular-hairy.

Sepals: 5, green or purple, united at the base, lanceolate to oblong, up to 1/10 inch long, usually smooth.

Petals: 5, white with 2-3 yellow dots near base, free from each other, nearly round but with a slender claw at the base, each petal up to 1/6 inch long.

Stamens: 10, the filaments broadened and petal-like.

Pistils: 2, united at base, the ovary superior.

Fruits: Capsules usually 2, beaked, more or less purplish, 1/6-1/3 inch long.

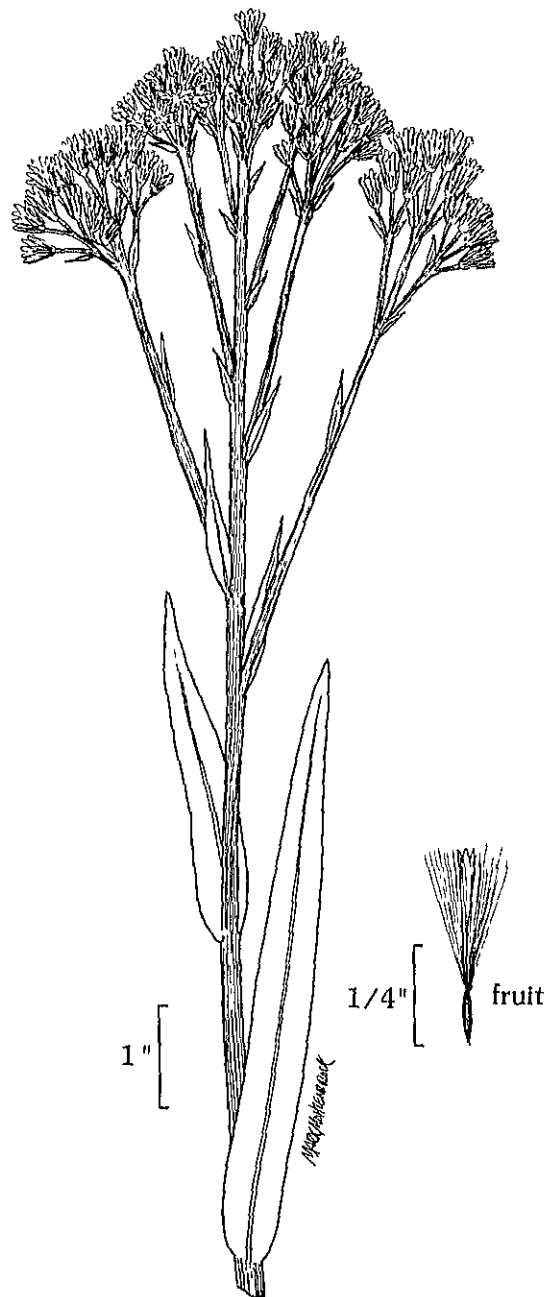
Water Groundsel

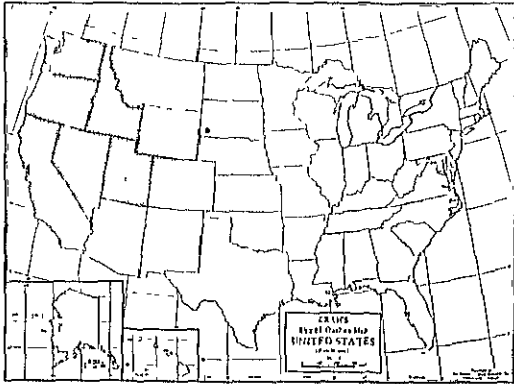
Senecio hydrophilus Nutt.

Family: Composite (Compositae)

May-August

Field Marks: This species has mostly basal leaves that are oblong to elliptic and without teeth, unbranched stems, and leaves and stems that are smooth and glaucous.





Local Notes:



Habitat: Along streams, in marshes, swamps, sometimes in alkaline habitats.

Habit: Perennial herb with a thickened rootstock and fibrous roots.

Stems: Upright, unbranched, hollow, up to 8 inches long, purplish, smooth, glaucous.

Leaves: Mostly basal, thick, oblong to elliptic, up to 8 inches long, up to 2 inches wide usually without teeth, smooth, glaucous; stem leaves few, smaller, sessile; leaf stalks of basal leaves elongated, winged.

Flowers: Many crowded into heads, with several heads crowded into an inflorescence; each head up to 1 inch across, consisting of 4-8 ray flowers (sometimes more), and a small central disk of disk flowers; bracts subtending each head 8-13, usually black-tipped.

Sepals: 0.

Petals: Some of them united to form yellow rays, others united to form yellow tubular flowers in the center of the head.

Stamens: 5.

Pistils: Ovary inferior, smooth.

Fruits: Achenes smooth, with fine bristles at the tip.

Notes: The achenes have some importance as food for waterfowl.

Arrow-leaf Groundsel

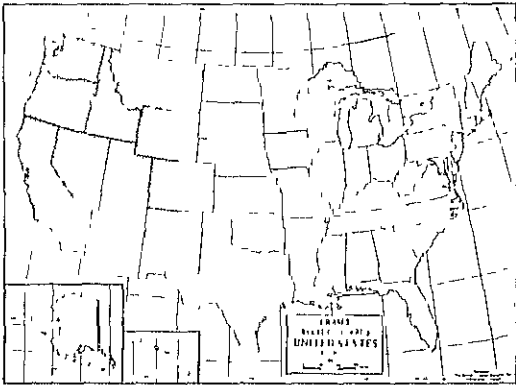
Senecio triangularis Hook.

Family: Composite (Compositae)

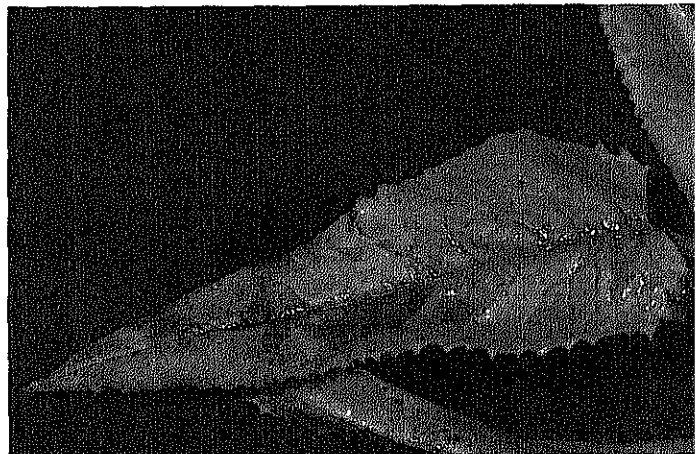
July-September

Field Marks: This *Senecio* is readily distinguished from all others by its triangular leaves that are conspicuously toothed





Local Notes:



Habitat: Along streams, in wet meadows, particularly in the higher mountains.

Habit: Perennial from a thickened rootstock and with fibrous roots.

Stems: Upright, usually unbranched, up to 4 feet tall, smooth or less commonly with soft hairs, usually several growing from the base of the plant.

Leaves: Alternate, simple, distinctly triangular, pointed at the tip, heart-shaped or truncate to the base, conspicuously toothed, smooth or rarely with soft hairs, up to 8 inches long, usually much smaller, up to 5 inches wide, the lower on long stalks, the uppermost much smaller and without stalks.

Flowers: Many crowded together into heads, with several heads arranged to form a flat-topped cluster, each head 1-1 1/4 inches across, subtended by 9-13 black-tipped bracts, all flowers with rays.

Rays: Yellow, up to 12 per head, up to 1/2 inch long or a little longer.

Sepals: 0.

Petals: 5, united to form a strap-shaped ray.

Stamens: 5.

Pistils: Ovary inferior.

Fruits: Achenes crowded into small heads, each achene smooth, several-veined, up to 1/5 inch long, bearing several soft, white bristles.

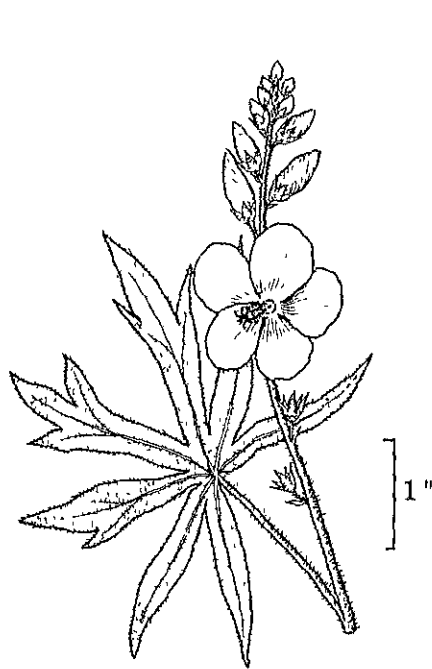
New Mexico Checker-mallow

Sidalcea neomexicana Gray

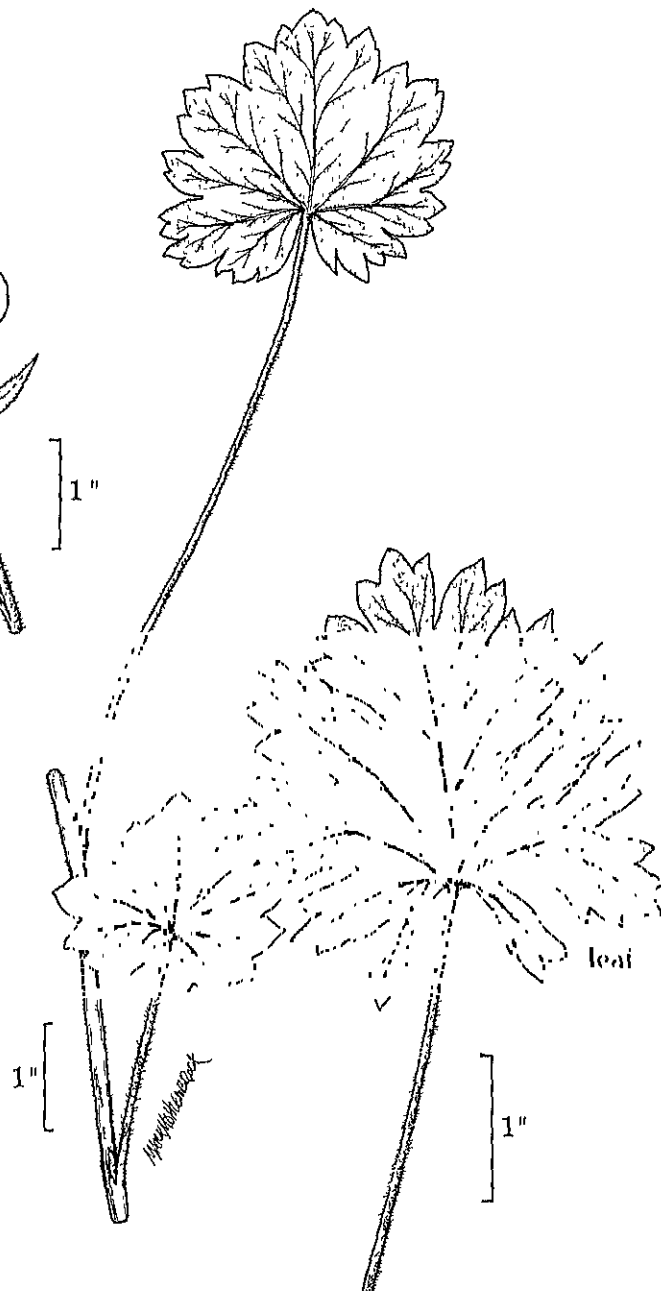
Family: Mallow (Malvaceae)

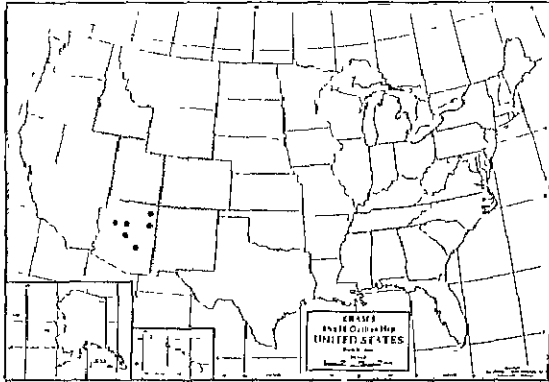
May-August

Field Marks: This handsome species is distinguished by its purple flowers, its hairy leaf surfaces, and its usually glaucous stems and leaves

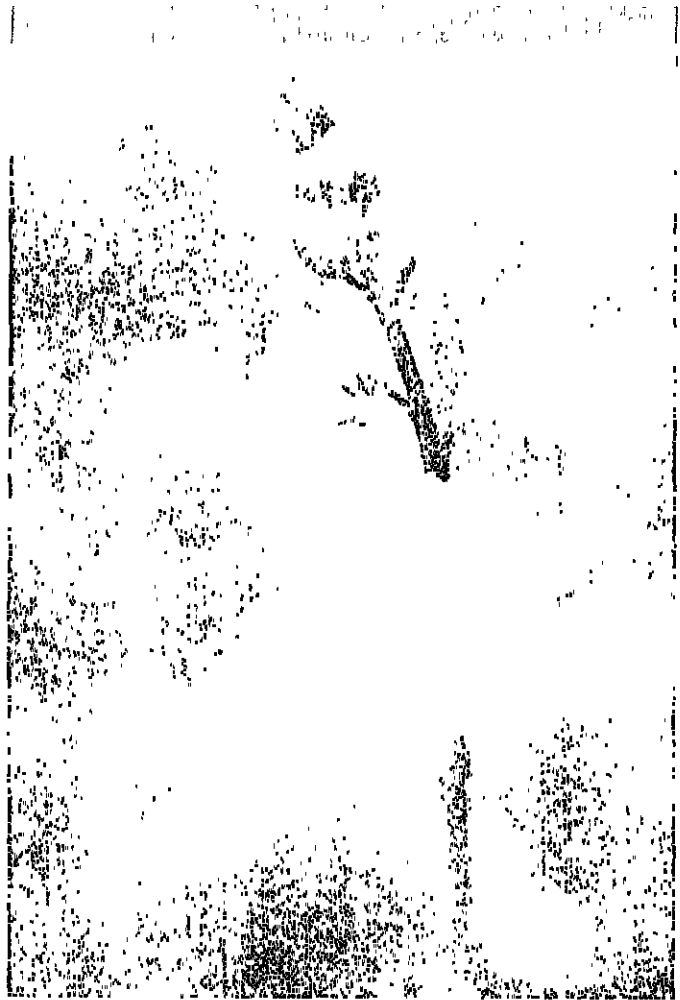


flowering branch with leaf





Local Notes:



Habitat: Wet meadows in the mountains.

Habit: Perennial herb with a thickened rootstock.

Stems: Upright, up to 2 1/2 feet tall, smooth or hairy, usually glaucous.

Leaves: Basal and alternate, hairy, orbicular, sometimes glaucous, up to 3 inches across, the basal leaves 5- to 9-lobed, with rounded teeth on the lobes, the upper leaves deeply 3- to 5-parted.

Flowers: Several in a raceme, subtended by bracts 1/4-1/2 inch long; flower stalks smooth to hairy.

Sepals: 5, green, united below, 1/6-1/4 inch long, hairy, the teeth pointed

Petals: 5, purple, free from each other, 1/2-3/4 inch long.

Stamens: Numerous on a central column.

Pistils: Ovary superior.

Fruits: 5- to 9-parted, up to 1/8 inch long, tipped with a hairy beak.

Notes: This species is sometimes grown as an ornamental because of its large, handsome flowers. The petals may be various shades of purple.

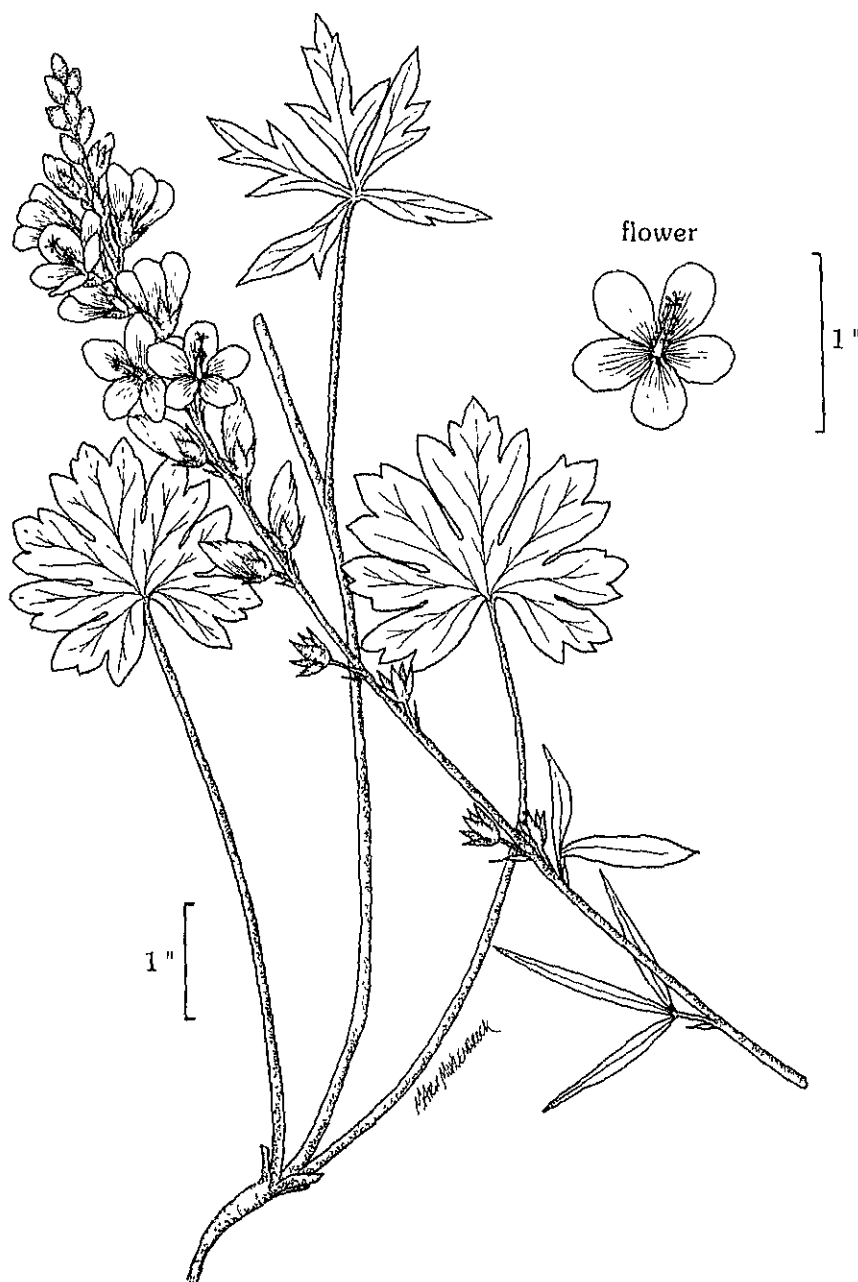
Oregon Checker-mallow

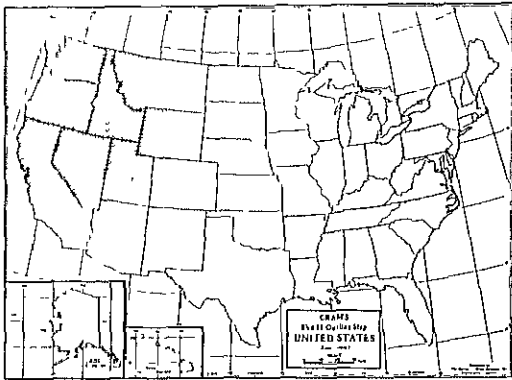
Sidalcea oregana (Nutt. ex Torr. & Gray) Gray

Family: Mallow (Malvaceae)

June-September

Field Marks: This large-flowered, showy species has pink to rose-purple flowers. It is further distinguished by the presence of a taproot, by star-shaped hairs on the stems and usually the leaves, and by its upper leaves much more deeply divided than the lower.





Local Notes:



Habitat: Wet meadows, along streams, marshes, sometimes in sagebrush.

Habit: Perennial herb with a taproot.

Stems: Upright, branched, up to 4 1/2 feet tall, usually with star-shaped hairs, sometimes glaucous.

Leaves: Alternate, palmately divided, the lower leaves deeply lobed, with each lobe again divided, the upper leaves more deeply lobed with narrow divisions, up to 4 inches across, with star-shaped hairs; lower leaves on long stalks.

Flowers: Many in a spike-like raceme, up to 2 inches across, pink to rose-purple; bracts usually absent; flower stalks up to 1/2 inch long

Sepals: 5, green, united below, up to 1/3 inch long, the lobes more or less triangular, with star-shaped hairs.

Petals: 5, pink to rose-purple, free from each other, up to 1 inch long.

Stamens: Many, united with the styles of the pistils to form a column, the column hairy

Pistils: 5, the filaments united with the stamens to form a column, the ovaries superior.

Fruits: Up to 1/8 inch long, veiny, with a very short beak.

Pursh Seepweed

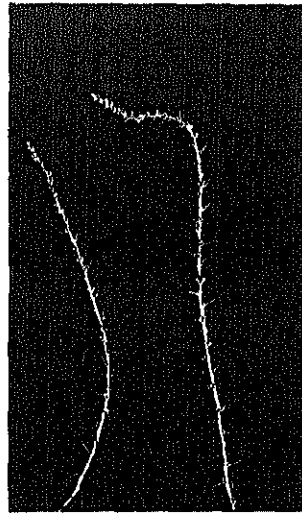
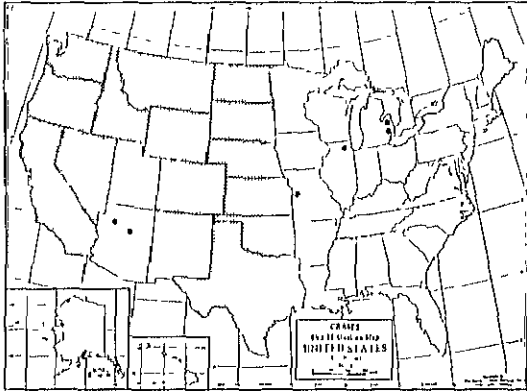
Suaeda depressa (Pursh) S. Wats.

Family: Goosefoot (Chenopodiaceae)

July-October

Field Marks: *Suaeda* differs from other members of the goosefoot family by the absence of spines and its usually perfect flowers subtended by very small bracts. This species differs from other species of *Suaeda* by its annual habit and its unequal sepals.





Local Notes:



Habitat: Damp saline or alkaline soils.

Habit: Annual herb with fibrous roots.

Stems: Upright to spreading, branched or unbranched, up to 2 feet long, smooth, usually bluish.

Leaves: Alternate, simple, linear, up to nearly 2 inches long, up to 1/6 inch wide, much smaller near the inflorescence, smooth, up to 1/8 inch long.

Flowers crowded into slender spikes, each flower in the axil of a bract; bracts 1/4 inch long.

Seeds 1 in size and shape, up to 1/12 inch long.

has persistent sepals; seeds black, somewhat veiny,

In Illinois and Mississippi, this species is not native in

Western Seepweed

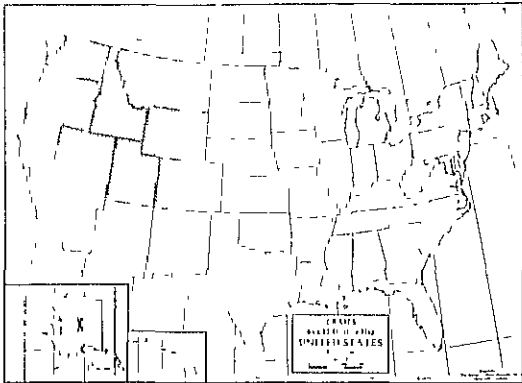
Suaeda occidentalis S. Wats.

Family: Goosefoot (Chenopodiaceae)

July-September

Field Marks: The genus *Suaeda* is differentiated by 5 greenish sepals that are subtended by bracts shorter than the sepals and by flowers usually with both stamens and pistils





Local Notes:



Habitat: Alkaline soils

Habit: Annual herb with fibrous roots.

Stems: Spreading to upright, branched or unbranched, up to 1 1/2 feet long, sometimes glaucous

Leaves: Alternate, simple, linear, up to 3/4 inch long, about 1/24 inch wide, pointed at the tip, tapering to the base

Several in short clusters in the axils of the leaves, subtended by bracts shorter than

ed below, the lobes rounded at the tip

; styles 2.

al, enclosed by the sepals, seeds black, shiny.

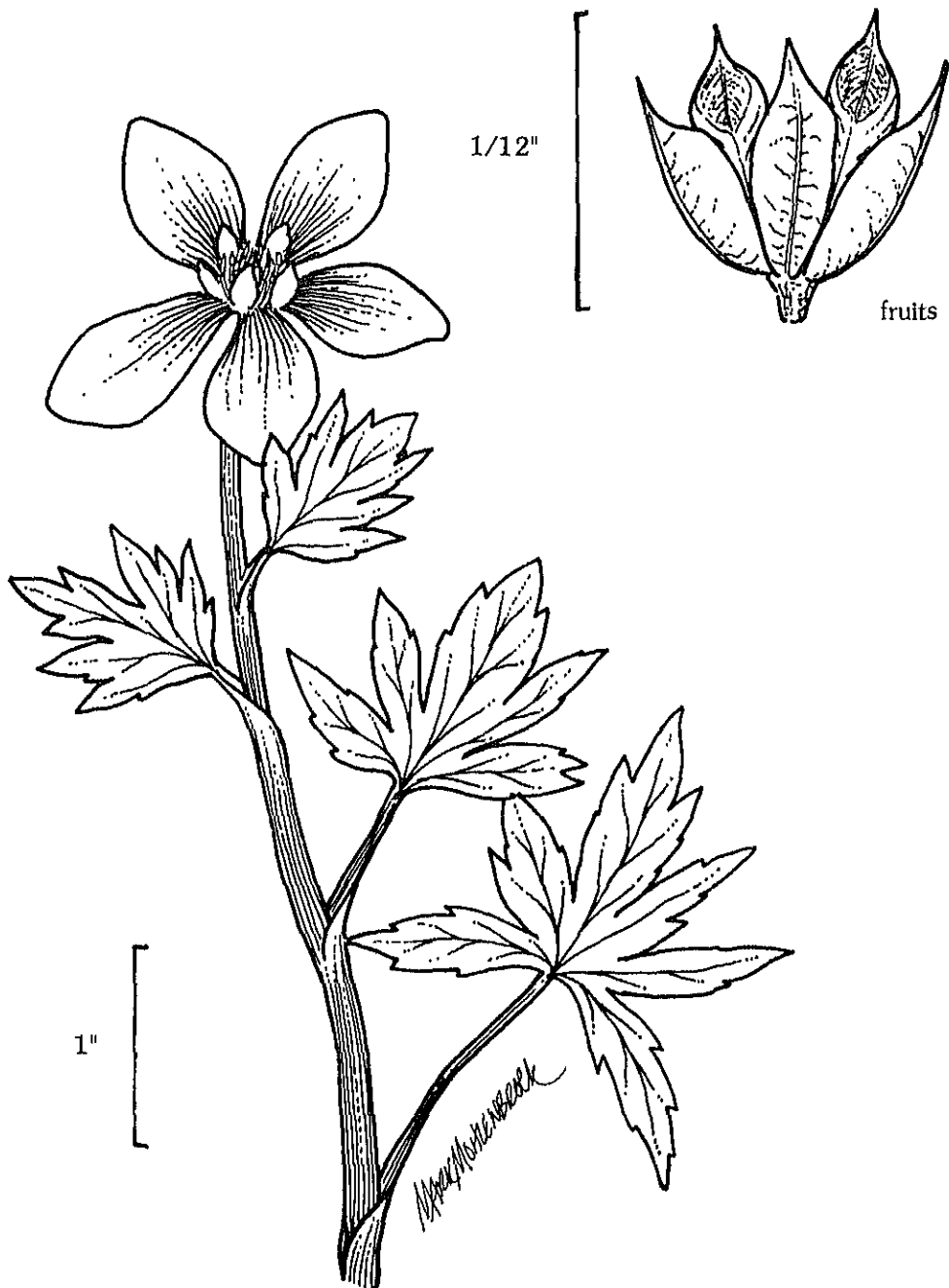
American Globeflower

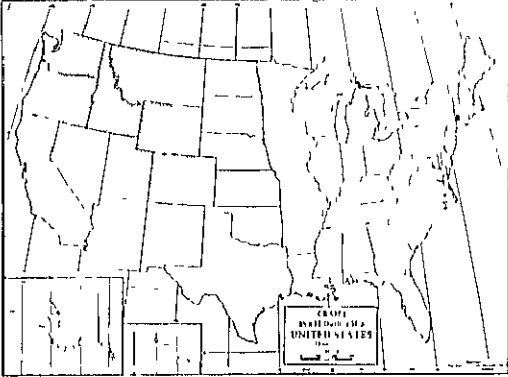
Trollius laxus Salisb.

Family: Butter-cup (Ranunculaceae)

June-August

Field Marks: This species is readily recognized by its large solitary flower with large sepals and smaller petals and by its deeply palmately lobed leaves





Local Notes:



Habitat: Swamps, wet woods, along streams, wet meadows, particularly in the mountains.

Habit: Perennial herb with thick, fibrous roots.

Stems: Upright, slender, up to 1 1/2 feet tall, smooth.

Leaves: Alternate, palmately 5-lobed, up to 8 inches long and broad, the lobes coarsely toothed or partly divided again, smooth, the basal leaves on long stalks, the 1 or 2 cauline leaves on short stalks or sessile.

Flowers: Solitary, up to 2 1/2 inches across, showy, usually whitish or greenish yellow.

Sepals: Usually 5, free from each other, petal-like, white or greenish yellow, up to 1 inch long.

Petals: Usually 5, free from each other, up to 1/4 inch long, each with a basal gland

Stamens: Numerous, usually longer than the petals.

Pistils: Numerous, each with a superior ovary.

Fruits: Follicles several, up to 1/2 inch long, containing many seeds

Notes: This handsome species varies considerably in flower color. It sometimes is grown as an ornamental

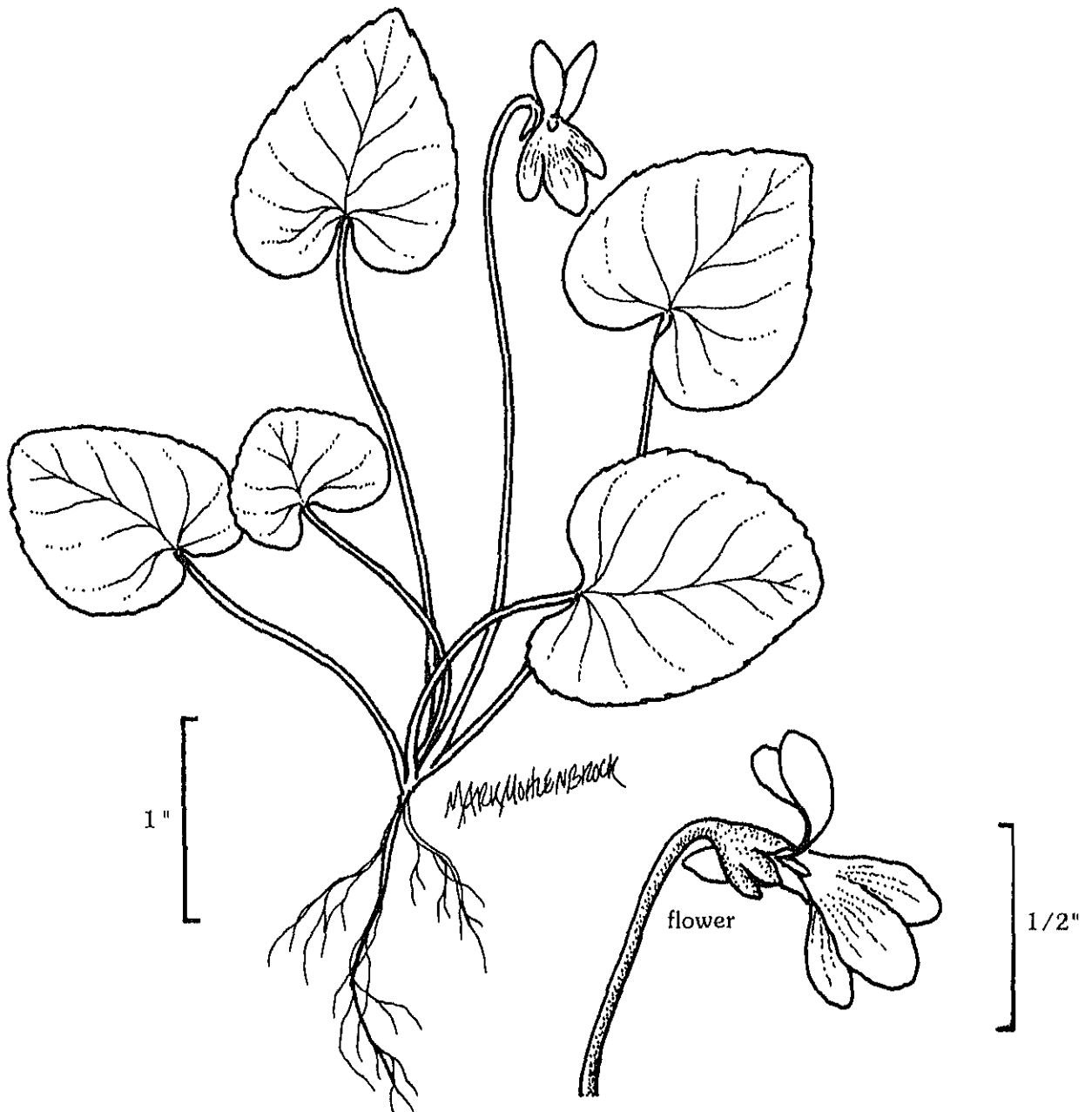
Small White Violet

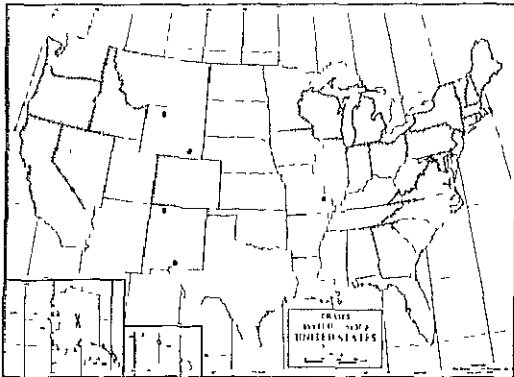
Viola macloskeyi Lloyd

Family: Violet (Violaceae)

May-August

Field Marks: Three of the 5 white petals of this violet have purple veins. There are no upright leafy stems in this species, with all leaves arising directly from the rhizome.





Local Notes:

Habitat: Wet meadows, along streams, bogs.

Habit: Perennial herb with creeping rhizomes and stolons.

Stems: Rhizomes below ground; horizontal stolons produced late in year; no upright leafy stems present.

Leaves: Simple, ovate to nearly round, rounded or more or less pointed at the tip, heart-shaped at the base, up to 1 1/2 inches long, smooth or sparsely hairy, on smooth or hairy stalks up to 4 inches long; stipules ovate, without teeth.

arising directly from the rhizomes, on stalks up to 6 inches long,

ovate to lanceolate, up to 1/6 inch long, smooth.

ever 3 also with purple stripes, 1/4 to nearly
r up to 1/8 inch long.

long, smooth; seeds dark brown, about 1/24

the year and often give rise to large mats of this

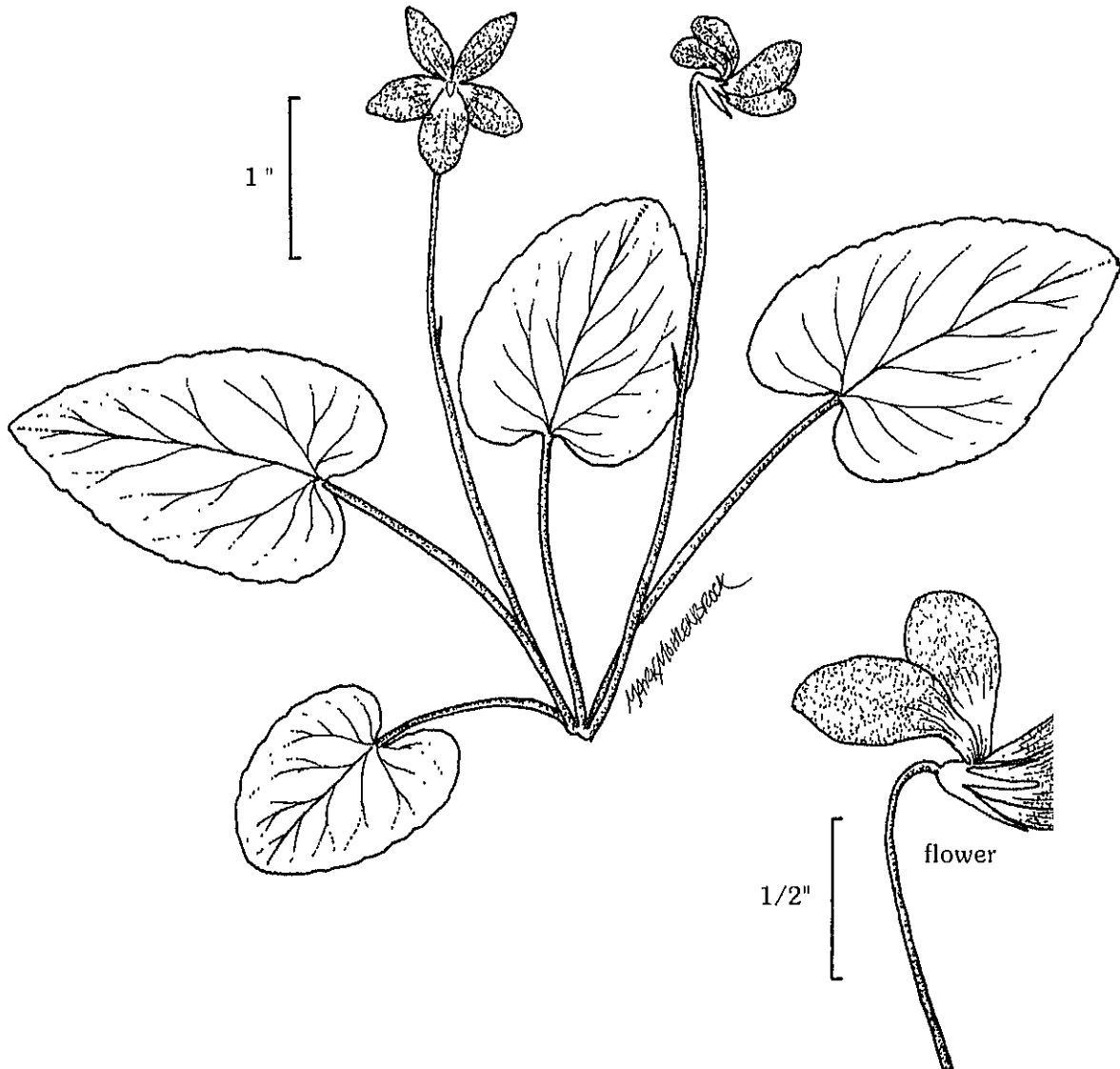
Northern Bog Violet

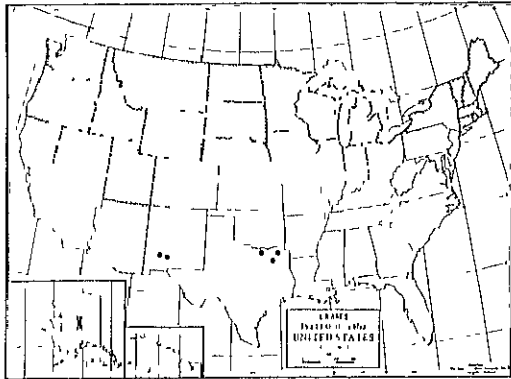
Viola nephrophylla Greene

Family: Violet (Violaceae)

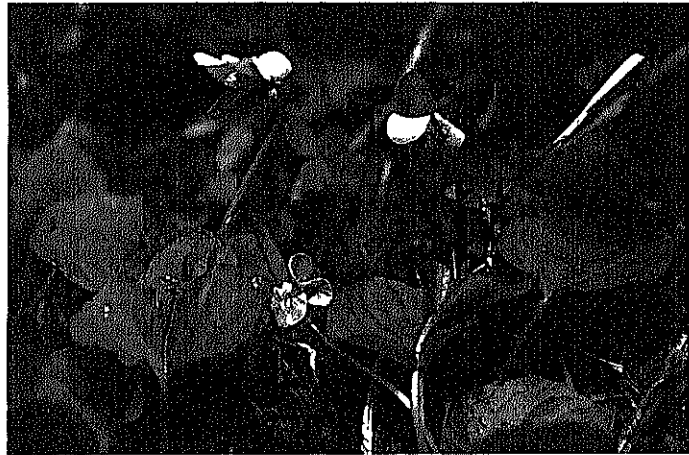
April-June

Field Marks: This is one of the stemless violets whose leaf stalks and flower stalks arise directly from underground rhizomes. This species has purple flowers and lacks stolons that trail across the soil.





Local Notes:



Habitat: Around springs, in bogs.

Habit: Perennial herb with a thickened rhizome and long, fibrous roots; stolons not present.

Stems: Underground as a thickened rhizome; flowering stems without leaves, smooth, up to 10 inches long.

Leaves: All basal heart-shaped, up to 2 1/2 inches long and wide, round-toothed, smooth, 1/2-3/4 inches long.

that arise directly from the rhizomes, the flower stalks often

late, free from each other, smooth.

ch other, 1/2-3/4 inch long, 3 of them with a dense tuft of

ovoid, 1/4-1/2 inch long, smooth; seeds pale, shiny, up to

